



THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

- This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.
- A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.
- This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.
- The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.
- When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.



THE UNIVERSITY *of* EDINBURGH

Depression in Older People: Meeting the Challenges of an
Ageing Population

Thesis Portfolio

Alison Somers Raeburn

Doctorate in Clinical Psychology

University of Edinburgh

August 2013

DClinPsychol. Declaration of own work

This sheet must be filled in (each box ticked to show that the condition has been met), signed and dated, and included with all assessments - work will not be marked unless this is done

Name: Alison Raeburn

Assessed work: Thesis

Title of work: Depression in Older People: Meeting the Challenges of an Ageing Population

I confirm that all this work is my own except where indicated, and that I have:

- Read and understood the Plagiarism Rules and Regulations ☒
- Composed and undertaken the work myself ☒
- Clearly referenced/listed all sources as appropriate ☒
- Referenced and put in inverted commas any quoted text of more than three words (from books, web, etc) ☒
- Given the sources of all pictures, data etc. that are not my own ☒
- Not made undue use of essay(s) of any other student(s) either past or present (or where used, this has been referenced appropriately) ☒
- Not sought or used the help of any external professional agencies for the work (or where used, this has been referenced appropriately) ☒
- Not submitted the work for any other degree or professional qualification except as specified ☒
- Acknowledged in appropriate places any help that I have received from others (e.g. fellow students, technicians, statisticians, external sources) ☒
- Complied with other plagiarism criteria specified in the Programme Handbook ☒
- I understand that any false claim for this work will be penalised in accordance with the University regulations ☒

Additionally, for SSR and Thesis submissions:

- Received ethical approval from the University of Edinburgh, School of Health ☒
- OR
- Received ethical approval from an approved external body (e.g. NHS Research Ethics Committee) and registered this application and confirmation of approval with the University of Edinburgh's School of Health's ethical committee ☒

Signature

Date

Please note:

a) If you need further guidance on plagiarism, you can:

i/ Speak to your director of studies / thesis supervisor

ii/ View university regulations at <http://www.ed.ac.uk/schools-departments/academic-services/policies-regulations>

b) Unless otherwise stated, referencing should be in the format of the BPS style guide, which is freely available from the BPS web site

CONTENTS

Acknowledgements	1
Overview to Thesis Portfolio	2
Abstract: Thesis Portfolio	4
PART I: SYSTEMATIC REVIEW	5-57
Chapter 1: Systematic Review Journal Article	6
Abstract	7
Introduction	8
Methodology	15
Results	21
Discussion	39
References	45
PART II: EMPIRICAL STUDY	58-105
Chapter 2: Extended Methodology	59
Chapter 3: Empirical Study Journal Article	69
Abstract	70
Introduction	71
Methodology	78
Results	84
Discussion	93
References	100
Overall Thesis Portfolio References	106
 APPENDICES	 124-137
1. Author Guidelines: Clinical Psychology Review	125
2. Author Guidelines: Psychology and Aging	127
3. North of Scotland REC Approval	129
4. NHS Highland R&D Approval	132
5. NHS Grampian R&D Approval	134
6. Participant Information Sheet	136

Word Count (excluding references and appendices): 18,356

Acknowledgements

I would like to firstly thank all the patients who took the time to participate in this study. I would also like to thank the many clinicians in NHS Highland who helped me during the recruitment phase. Thank you also to Dr Amber Saldias who worked hard to recruit participants in NHS Grampian. I must thank Professor Ken Laidlaw for his enthusiasm and positive encouragement at every step. His expertise has been invaluable. I would like to also thank Dr Paul Graham Morris for his helpful feedback during the latter stages of my thesis. I am grateful to Dr Jim Law for always taking the time to talk about my thesis, and for his helpful supervision. I finally must thank my friends and family. Thank you to Ann and my fellow trainees for their endless support.

Overview to Thesis Portfolio

This thesis has been conducted in part fulfilment of the Doctorate in Clinical Psychology. It comprises two parts: a systematic review and an empirical research study. These are two distinct articles both aiming to provide insight into the challenges of late life depression.

Firstly, the ageing population will mean that mental health services are likely to see an increase in older people with depression, many of whom will have neurological conditions common in late life, including dementia, stroke and Parkinson's disease. These conditions have a high risk of depression associated with them. Addressing depression can have a significant effect on quality of life and at present there is limited evidence for effective treatments for depression in neurological conditions. Researchers and therapists have previously been reluctant to conduct psychological therapy with this population, however, there is preliminary evidence that psychological therapies can be efficacious for this population. CBT is structured, goal focused and orientated in the present therefore may be easily adapted for the needs of people with neurological conditions and associated cognitive impairment. Chapter one presents systematic review of this literature, titled 'Cognitive and behavioural therapies for the treatment of depression in people with dementia, stroke and Parkinson's disease'.

Secondly, depression in the general older adult population will also present challenges for mental health services. Psychological therapies have been shown to be equally effective for older people as they are for younger adults. However, there are a range of gerontological issues that must be considered when working with older people. For example, cohort beliefs, interpersonal role changes and physical health changes may all impact on the way an older person conceptualises their difficulties. In particular, depression in older people has been associated with negative attitudes about ageing. Cognitive theory states that attitudes are mood-state dependent and if negative or dysfunctional attitudes are modified, this can result in improvement in mood. Exploring the attitudes of older people with depression will aid our understanding of late life depression and may provide useful information on whether attitudes to ageing should be specifically addressed during therapy for depression.

The current research study explores attitudes to ageing with a clinical sample of depressed older adults and compares attitudes with non depressed control participants. Chapter two outlines the full methodology used in the research study and chapter three contains the research study, titled 'Attitudes to ageing and clinical depression in older people', presented within a journal article format.

Thesis Portfolio Abstract

Systematic Review: Neurological conditions common in late life include dementia, stroke and Parkinson's disease (PD). Depression in these conditions is common and can have significant adverse effects quality of life. Psychological therapies such as CBT are effective for late life depression, however, there is a lack of empirical evidence for CBT based therapies in the treatment of depression in neurological conditions. The current systematic review was therefore carried out to evaluate the evidence for cognitive and behavioural therapies in the treatment of depression in dementia, stroke and PD. A total of 19 studies were included in the review. It was concluded that there is currently insufficient high quality evidence examining CBT based therapies in people with these conditions. There are, however, promising preliminary results which need to be examined further using high quality research designs including long term follow up data.

Empirical Research Study: Depression in older people can have a detrimental effect on morbidity and quality of life. Unfortunately it is often unrecognised and untreated. Given the challenges associated with ageing, such as losses and physical health problems, people may consider depression as 'understandable' and an inevitable consequence of ageing. The current study aimed to explore older people's attitudes towards their own ageing and the effect of clinical depression. Twenty eight participants over the age of 60 with clinical depression were compared with a control sample of non depressed participants. Groups were compared on measures including: Attitudes to Ageing Questionnaire, Geriatric Depression Questionnaire, quality of life, satisfaction with health and various demographic variables. The clinically depressed sample also completed the Geriatric Anxiety Scale, Beck Hopelessness Scale, Prospective and Retrospective Memory Questionnaire and the Understandability Questionnaire. Results showed significant differences in attitudes to ageing relating to psychosocial loss, with the depressed population reporting more negative attitudes. Depression was found to be a significant predictor of negative attitudes and factors including increased hopelessness and reduced quality of life were also associated with negative attitudes. This study highlights the importance of assessing attitudes to ageing in older people with depression as this may have implications for psychological treatments for late life depression.

PART I – SYSTEMATIC REVIEW

Chapter 1: Systematic Review

Cognitive and Behavioural Therapies for the treatment of depression in dementia, stroke and Parkinson's disease

Alison Raeburn

Department of Psychological Services (NHS Highland)

Professor Ken Laidlaw

Department of Clinical Psychology (University of East Anglia)

Dr Jim Law

Department of Psychological Services (NHS Highland)

Dr Paul Graham Morris

Department of Clinical Psychology (University of Edinburgh)

*This review has been written in accordance with Clinical Psychology
Review (Appendix 1)*

Word Count: 8143 (excluding abstract and references)

Abstract

Background: Dementia, stroke and Parkinson's disease (PD) are three common neurological conditions in older people. Depression in these conditions significantly affects quality of life and exacerbates symptoms of the conditions. There is a need for effective psychological treatments therefore this review aims to systematically review the evidence for cognitive and behavioural therapies in the treatment of depression in these three conditions. **Method:** A systematic literature search was conducted using search engines including Medline, Embase, PsycInfo and CINAHL. Inclusion and exclusion criteria are described and included articles were assessed on methodological quality. **Results:** Nineteen studies met the inclusion criteria for this review: five studies examining dementia, five examining stroke and nine examining PD. Results across the different conditions were mixed. There was higher quality evidence for the efficacy of behavioural therapies in people with dementia. The evidence for post stroke depression was inconclusive and there is preliminary evidence that CBT may be efficacious for people with PD. **Conclusions:** There is currently insufficient high quality evidence for the efficacy of CBT based therapies for people with these three neurological conditions. However, the evidence for CBT in people with PD, and behavioural therapy for people with dementia is promising. Further high quality research is required with longer term follow ups in order to determine the efficacy of cognitive and behavioural therapies for people with dementia, stroke and PD.

Keywords: Depression, stroke, dementia, Parkinson's disease, CBT

Abstract Word Count: 225

Introduction

Clinical depression in late life is a common condition which affects about 8-16% of people over the age of 65 (Blazer, 2003). The prevalence rate increases for people in care settings including hospitals and care homes (Jorm, 2000). Rates of depression also increase in those with neurological conditions (Rodda, Walker & Carter, 2011). As the population of older people grows, there will be an increase in neurological conditions such as dementia, stroke and Parkinson's disease (PD). Despite the increased risk of depression, it is often unrecognised and therefore untreated in this population. This may be partly due to the challenges in diagnosing depression in these conditions, for example, depressive symptoms may be attributed to fatigue or reduced concentration resulting from the condition (Raskind, 2008). Comprehensive assessment of symptoms might also be further complicated by individuals' cognitive impairments and communication difficulties (Rickards, 2005). Identifying and treating depression in these conditions is of increasing importance as depression can have a significant effect on the prognosis of the condition and on quality of life of patients and their carers (Rickards, 2006).

Treatment of late life depression has largely relied on pharmacological approaches (Rodda et al., 2011). However, the problems associated with polypharmacy in older people are well documented (Kaufman, 2011). It is therefore important to examine the role of psychotherapy for depression in later life. In a systematic review examining 112 studies, it was concluded that psychotherapy is an effective treatment for depression and it is equally effective in older and younger adults (Cuijpers, van

Straten, Smit & Andersson, 2009). NICE (2009) guidelines recommend a combination of medication and psychotherapy in the treatment of late life depression.

Among the psychotherapies for older people, cognitive behavioural therapy (CBT) has the largest evidence base (Pinquart, Duberstein & Lyness, 2007). It focuses on the links among people's thoughts, feelings and behaviour and it may be particularly useful for older people as it is easy to understand, problem focused and skills enhancing, and it empowers individuals to develop a range of coping strategies (Laidlaw, Thompson & Gallagher-Thompson, 2004). Several systematic reviews and meta-analyses have examined the role of CBT for late life depression and concluded that it is more effective than treatment as usual, and equally effective to other treatments, including pharmacotherapy and other psychotherapies (e.g. Gould, Coulson & Howard, 2012).

It has been suggested that CBT may be adapted for use with people with neurological conditions (Broomfield et al., 2011). It has already been applied within a range of different populations, including people with learning disabilities (e.g. Hassiotis et al., 2013) and people with long term medical conditions (e.g. Halford & Brown, 2009). It has been shown to be effective in reducing depressive symptoms in people with physical health conditions, such as cancer and diabetes (e.g. Beltman, Voshaar & Speckens, 2010). With regard to neurological conditions, it has been successfully used to treat depression in people with multiple sclerosis (e.g. Mohr, Boudewyn, Goodkin, Bostrom & Epstein, 2001) and traumatic brain injury (e.g. Fann, Hart & Schomer, 2009).

Despite evidence suggesting that CBT may benefit people with various neurological conditions, there is still a lack of research examining this in older adults. It may be that researchers have been reluctant to use CBT with this client group due to the cognitive impairments that may make it difficult for people to engage and utilise it effectively. However, CBT can be adapted for people with cognitive impairment (Spector et al., 2012), for example, by utilising memory aids, increasing repetition and maintaining highly structured sessions (Gellis, McClive-Reed & Brown, 2009).

The most common neurological conditions occurring in older people are dementia, stroke and Parkinson's disease. Given the high rates of depression associated with these conditions and the significant impact it can have on clinical outcomes, it is important that there are effective treatments for depression. Each of these conditions will firstly be outlined separately.

Dementia

Dementia affects over 800,000 people in the UK (Luengo-Fernandez, Leal & Gray, 2010) and Alzheimer's disease (AD) is the most common type of dementia. AD is characterised by gradual decline in cognitive functioning. Additionally, psychiatric and behavioural disturbances can affect up to 90% of people with AD (Lyketsos & Olin, 2002) and 20-25% of people with AD will experience major depression. The link between depression and dementia is complex, and although some researchers consider depression as a prodrome to dementia (Brommelhoff et al., 2009), the presence of dementia also increases the risk of depression (Wilkins, Kiosses & Ravdin, 2010).

Symptoms of depression in dementia, such as apathy, hopelessness and anhedonia can have a significant impact on the prognosis of the disease; it exacerbates cognitive impairment and has been linked with increased mortality (Sutcliffe et al., 2007). Additionally, depression and anxiety have been associated with reduced quality of life (Hoe, Hancock, Livingston & Orrell, 2006) and increased risk of admission to a nursing home (Gibbons et al., 2002). As well as increasing distress to the individual suffering from dementia, depression also increases caregiver distress (Gonzalez-Salvador, Arango, Lyketsos & Barba, 1999).

With regard to treatment of depression in dementia, there is insufficient evidence that antidepressant medication is effective (Bains, Birks & Denning, 2002). The UK National Institute for Health Research conducted a large scale RCT examining antidepressant medication for depression in dementia and concluded that they are not cost effective treatments (Banerjee et al., 2013). They suggested that antidepressants should not be prescribed as a first line treatment and that psychosocial interventions should be further examined. A range of psychological approaches in addition to CBT have been examined, including interpersonal therapy (Burns et al., 2005), and group psychotherapy (Cheston, Jones & Gillard, 2003). However, these studies did not find significant treatment effects. There is also an increasing recognition of the importance in involving carers in treatments (Paukert et al., 2010).

Stroke

Stroke affects around 130,000 people per year in the UK (National Audit Office, 2005) and it is most common cause of disability and the third most common cause of death in the UK. However, survival rates are increasing and as they do, there will be

a greater need for reducing morbidity in survivors. In addition to physical disability and cognitive impairments, post stroke depression has been reported to occur in about 30 per cent of cases (Kneebone & Lincoln, 2012). Vulnerability to depression is increased following stroke due to the nature of the impairments it causes. For example, impaired physical functioning can result in a reduced ability to engage in pleasurable activities and cognitive deficits can result in negative thinking biases (Broomfield et al., 2011).

It is important to assess and treat post stroke depression as it is associated with increased cognitive impairment and increased mortality (Williams et al., 2007). It also reduces quality of life and increases burden to carers (Kootker, Fasotti, Rasquin, van Heugten & Geurts, 2012). There is a lack of research examining the effectiveness of psychological treatments for post stroke depression. Hackett, Anderson, House and Xia (2008) conducted a systematic review of the effects of psychotherapy on post stroke depression and concluded that there are not enough studies of good quality to demonstrate any significant benefit of psychological treatments. Despite this limited evidence base, researchers have suggested that CBT ought to be suitable for people with post stroke depression (Broomfield et al., 2011) and therefore further research is needed to examine whether there is evidence for an augmented CBT approach in this population. Most of the research to date has examined interventions targeting the prevention of post stroke depression (Robinson et al., 2008). In particular, motivational interviewing has been shown to reduce the likelihood of developing depression following stroke (Watkins et al., 2007).

Parkinson's disease

Parkinson's disease (PD) is a degenerative neurological condition characterised by motor symptoms such as bradykinesia (slowness of movement), tremors and rigidity (Misayaki et al., 2006). As such, simple activities of daily living including walking, dressing and eating are more difficult for people with PD. This can have a significant impact on an individual's quality of life and relationships with others.

Non-motor symptoms include neuropsychological symptoms such as cognitive impairment (Macht, Pasqualini & Taba, 2007). Depressive symptoms are also common, occurring in about 35 per cent of people with PD (Reijnders, Ehrt, Weber, Aarsland & Leentjens, 2008). There is debate in the literature as to whether depression in PD is 'reactive' or 'organic', with some researchers suggesting that people with PD are more susceptible to depression due to the neuropathological changes associated with the condition (Slaughter, Slaughter, Nichols, Holmes & Martens, 2001). However, it has been stated that there is little evidence for this distinction and that it should not affect treatment choice (Leentjens, 2004). Similar to stroke and dementia, depression in PD has an adverse affect on prognosis of the disease and has been associated with a greater decline in cognitive and motor functioning as well as poorer quality of life (Menza et al., 2009).

The treatment of depression in PD has largely relied on pharmacotherapy. However, there is insufficient evidence that antidepressant treatments are effective in people with PD (Burn, 2002; Leentjens, 2004). This is also made more complicated by adverse side effects, for example, the risk of falls in PD increases with polypharmacy (Ashburn et al., 2001). This highlights the importance of having alternative

interventions for mood disorders in PD (Charidimou, Seamons, Selai & Schrag, 2011). It has been suggested that psychological therapy such as CBT may be useful in the treatment of depression in PD (Cole & Vaughan, 2005). Assogna et al.'s (2013) study demonstrated that depressive symptoms in people with PD are comparable to those with other non-neurological illnesses, suggesting that people with PD could also potentially benefit from CBT. Further research is needed, however, as a recent Cochrane review examining treatments for depression in PD did not find any studies of psychological therapy that were of a good enough quality to include in their review (Ghazi-Noori, Chung, Deane, Rickards & Clarke, 2009).

Rationale for current systematic review

Dementia, stroke and PD are the most common neurological conditions affecting older people and there is an increased risk of depression associated with them. Depression impairs quality of life and causes excess disability in these conditions. Therefore, effective treatments for depression will have a significant impact on the overall functioning of people with neurological conditions (Raskind, 2008), thus improving health outcomes and lowering treatment costs.

Research to date has shown indications that psychological interventions may be effective for people with neurological disorders (e.g. Yang, Sajatovic & Walter, 2012). In particular, CBT may be particularly suitable for use in the population as it is structured, time limited and focuses on the here and now. However, a focused review of the role of CBT in treating depression in these conditions has not yet been conducted. This will be of relevance for clinicians working in older adult mental health services as a high proportion of service users will have will have neurological

conditions. It will also consolidate the existing research and identify areas for future research.

Methodology

Aim

The aim of this systematic review is to investigate the efficacy of cognitive and behavioural therapies for the treatment of depression in people with neurological conditions common in older people, including dementia, stroke and Parkinson's disease (PD).

Search strategy

The Cochrane database of systematic reviews (CENTRAL) was searched to ensure that there were no existing reviews of this topic. Then OVID databases: Medline (1946 - 2013) and EMBASE (1974 – 2013) were searched. The EBSCO databases: PsychINFO (to 2013) and CINAHL (to 2013) were also searched.

Search terms included: cognitive therapy, behaviour therapy, cognitive behaviour therapy and problem solving therapy. These were used in conjunction with: depression or depressive disorder. Each neurological condition was searched for separately using the following search terms: stroke or cerebrovascular accident; Parkinson's disease or parkinsonism; dementia or Alzheimer's disease. Key words were identified for each database and the search terms were mapped to a subject heading relevant to the particular database. The search engine Google Scholar and

Science Direct were also used during the search strategy and the references of relevant articles were examined in order to gather further papers.

Inclusion and exclusion criteria

Inclusion and exclusion criteria were determined based on PICOS criteria, outlined in the Centre for Reviews and Dissemination Guidelines (CRD, 2008).

Population

Studies were selected if they included participants with diagnoses of dementia, stroke or PD. In order to ensure that the intervention was effective in a particular condition, studies were excluded if they examined participants with more than one neurological condition. Although there may be overlap, for example, individuals with vascular dementia may also have had strokes, the primary diagnosis was taken into consideration. Studies were included if participants had the presence of depression of any severity. This was based on either meeting criteria for depression according to the DSM-IV or ICD-10. Alternatively, depression could be indicated by use of clinical cut-off scores on standardised outcome measures. The review only included studies confined to adults (aged 18 or over).

Intervention

The primary intervention examined is CBT. There are a range of therapies that are based on cognitive behavioural principles and can be classed as variations of CBT. Thus, therapies including behaviour therapy, cognitive therapy or problem solving therapy were also included in this review. Most interventions involved individualised CBT, however, telephone CBT, group CBT and computerised CBT (cCBT)

interventions were also included. There was no limit stipulated on number or length of sessions.

Outcome

Studies were included if level of depression was an outcome following treatment. Studies that did not use standardised outcome measures for assessing depression were excluded. Papers that also included other outcomes, for example, anxiety or quality of life, were not excluded.

Study design

Randomised controlled trials (RCTs) were sought as they are generally believed to provide the highest quality of evidence when reviewing interventions. However, studies using other designs were included if they met the above inclusion criteria, such as uncontrolled trials with pre and post measures and case series designs.

Other criteria

Papers were limited to English language as there were no translation services available. It is important to carry out a broad search of literature, both published and unpublished. However, due to constraints of this review, only research articles from peer reviewed journals were included. Review articles were excluded.

Quality criteria

Criteria were developed in order to rate the methodological quality of the included studies. These criteria were based on the SIGN 50 (2011) guidelines and adapted to the needs of the current review question. The PRISMA statement (Liberati et al.,

2009) for reporting systematic reviews was also consulted. It states that the assessment of risk of bias should be addressed using standardised criteria, which may need to be adapted depending on the nature of the included studies. The quality criteria used in this systematic review are outlined in Table 1.1.

Table 1.1: Quality Criteria

Quality Criteria	Description	Rating
1. Study design	<i>Experimental</i> RCT	Well covered (3)
	<i>Experimental</i> Non randomised controlled trial	Adequate (2)
	<i>Observational</i> Before and after (uncontrolled trial)	Poor (1)
	<i>Observational</i> Case series	Very Poor (0)
2. Clearly focused and appropriate research question(s)	Question(s) clearly focused and appropriate	Well covered (3)
	Question(s) adequately focused and appropriate	Adequate (2)
	Question(s) poorly defined or inappropriate	Poor (1)
	No research question(s) described	Not addressed (0)
3. Population appropriate and clearly described using inclusion and exclusion criteria	Population clearly appropriate to research question e.g. clear diagnosis of depression and neurological condition	Well covered (3)
	Population adequately appropriate to research question	Adequate (2)
	Population inappropriate or poorly described	Poor (1)
	Population not addressed	Not addressed (0)
4. Appropriate and clearly randomised control group	Random allocation, investigator(s) blinded, treatment and control groups comparable at start of trial	Well covered (3)
	Control group adequately randomised or groups not comparable	Adequate (2)
	Control group inappropriate or not randomised	Poor (1)
	No control group	Not addressed (0)

5. Intervention clearly described to ensure reliability and external validity of therapy	Intervention clearly described, treatment protocols followed which are replicable. Study ensures external validity of therapy.	Well covered (3)
	Intervention adequately described or no treatment protocols used.	Adequate (2)
	Intervention poorly described or poor validity of therapy.	Poor (1)
	Intervention not described or inappropriate intervention used.	Not addressed (0)
6. Intervention appropriately conducted to ensure internal validity and treatment fidelity	Intervention appropriately carried out by a suitably trained professional, and attempts made to ensure treatment fidelity (e.g. monitoring to ensure therapy administered accurately and consistently)	Well covered (3)
	Intervention not carried out by trained professional and only adequate attempts to ensure fidelity.	Adequate (2)
	Intervention not carried out by trained professional or no attempts made to ensure fidelity	Poor (1)
	Information on therapist(s) or treatment fidelity not provided	Not addressed (0)
7. Use of appropriate and standardised outcome measures that are valid and reliable for measuring depression	All depression outcome measures appropriate, valid, reliable and standardised	Well covered (3)
	Most (more than 50%) depression measures are appropriate and standardised.	Adequate (2)
	Some (less than 50%) depression measures appropriate and standardised	Poor (1)
	Inappropriate depression measures used	Not addressed (0)
8. Appropriate and clearly reported statistical analysis	Appropriate and clearly reported statistical analysis	Well covered (3)
	Appropriate and adequately reported statistical analysis	Adequate (2)
	Inappropriate or poorly conducted statistical analysis	Poor (1)
	Statistical analysis not carried out or not reported.	Not addressed (0)
9. Follow up measures administered	Follow up measures > 12 months	Well covered (3)
	Follow up measures > 6 months	Adequate (2)
	Follow up measures < 6 months	Poor (1)
	No follow up measures taken	Not addressed (0)

Results

Study Inclusion

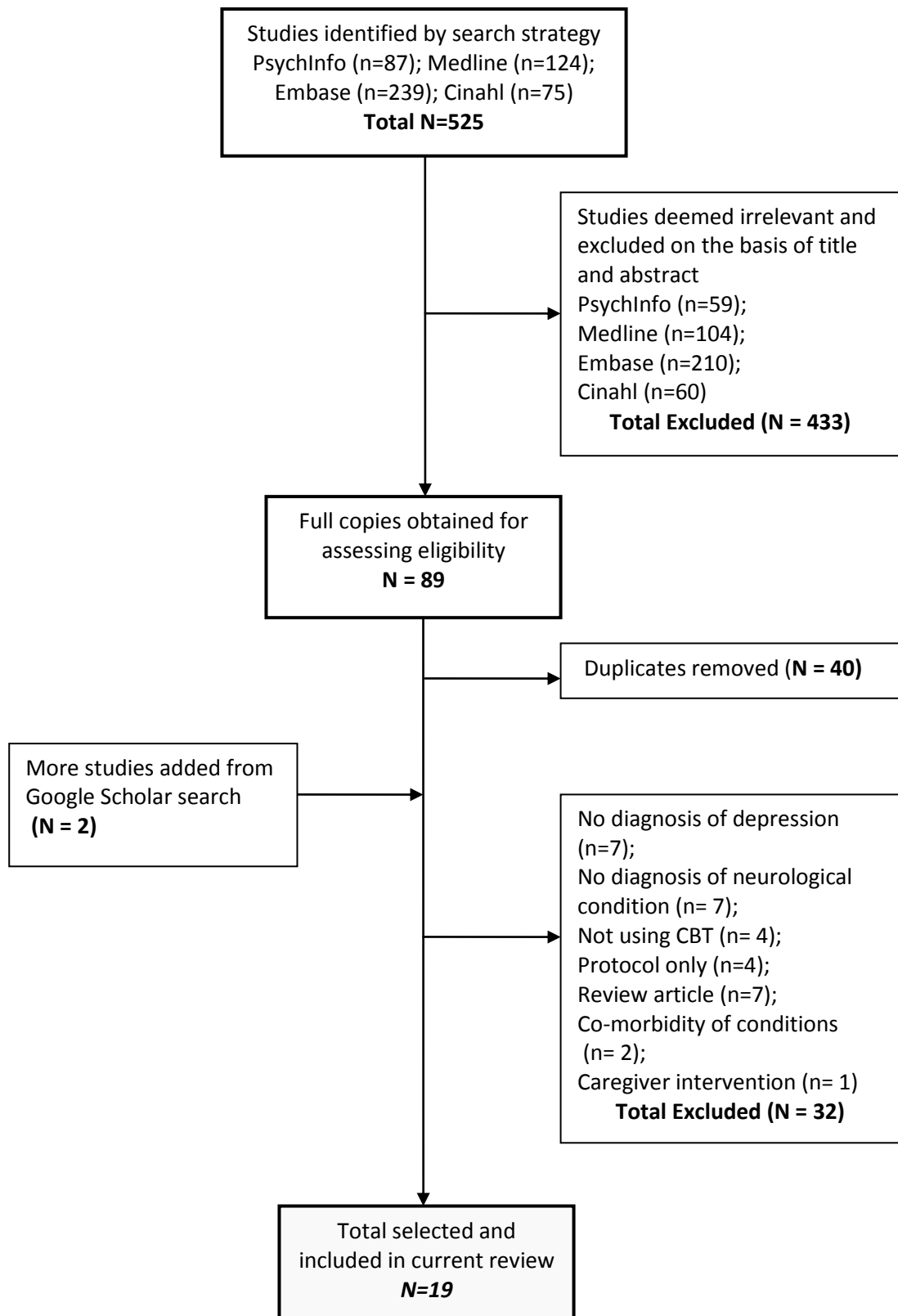
The search strategy yielded 525 results. The titles and abstracts of these studies were screened and those that were irrelevant were excluded. This resulted in a total of 89 studies remaining. Full copies of these papers were analysed using the inclusion and exclusion criteria. Duplicates were removed and further articles were removed as shown in Figure 1. A total of 19 articles were therefore selected for inclusion in this review.

Quality assessment

The quality criteria outlined in Table 1.1 were applied to each of the studies. In order to increase confidence in the ratings, each paper was co-rated by a Trainee Clinical Psychologist. Agreement (within two marks) on the total quality score was found for 14 out of 19 (74%) of the co-rated papers. Disagreement by three marks was found for four of the papers, and one paper's ratings disagreed by four marks. All disagreements were reviewed through discussion and ratings were amended to the consensus.

The total quality score that studies could receive was 27. There is evidence that numerical ratings of quality can be misleading when conducting systematic reviews (Liberati et al., 2009) therefore the studies were also categorised into qualitative ratings: Poor (0-14), Good (15-20), Excellent (21-27). The ratings for each of the studies in relation to the quality criteria are shown in Table 1.3.

Figure 1. Identified studies and reasons for exclusion



General characteristics of studies

The general characteristics of the included studies are described in Table 1.2. In the 19 studies admitted into this review, there were seven RCTs, four uncontrolled trials and eight case series designs, all meeting quality and inclusion criteria. With regard to the neurological conditions examined, five studies included people with dementia, five included people who had experienced a stroke, and nine studies included people with PD.

Most of the studies examined individualised CBT, however, two papers examined telephone-delivered CBT for people with PD (Dobkin et al., 2011b; Veazey, Cook, Stanley, Lai & Kunik, 2009). One study examined group CBT for people with PD (Feeney, Egan & Gasson, 2005). Five of the studies focused on behavioural interventions (Kiosses, Arian, Teri & Alexopoulos, 2010; Mitchell et al. 2009; Snarski et al., 2011; Teri, Logsdon, Uomoto & McCurry, 1997; Thomas, Walker, MacNiven, Haworth & Lincoln, 2012).

Table 1.2. Characteristics and findings of included studies

Author	Design	Active Intervention	Relevant outcome measures	Active Intervention Participants	Control participants	Follow up measures taken	Results	Quality score and qualitative rating
<i>Dementia</i>								
Kiosses et al. (2010) <i>USA</i>	RCT	PST (12 sessions with trained therapist)	HAM-D	N = 15 (mean age 80)	Supportive therapy (n=15; mean age 78)	None	PST was significantly more effective at reducing depressive symptoms than supportive therapy.	Excellent (21)
Scholey & Woods (2003) <i>UK</i>	Case series	CBT (8 sessions with trained therapist)	GDS-30	N = 7 (mean age 72)	None	None	Statistically significant decrease in mean GDS-30 scores. Two of the patients made clinically significant improvements.	Poor (14)
Snarski et al. (2011) <i>USA</i>	RCT	BA (8 sessions with graduate psychology students)	GDS-15	N = 25 (mean age 71)	TAU (n = 25; age >65)	None	24% of the BA group showed clinically significant reduction in GDS-15 scores, compared with 12% of controls.	Excellent (21)
Teri et al. (1997) <i>USA</i>	RCT	BT (9 sessions with geriatrician)	HAM-D, BDI, CSDD	Problem solving (n=19; mean age 78), Pleasant events (n=23; mean age 72)	Typical care control (n= 10; mean age 79) Wait list control (n = 20; mean age 76)	6 months	A significant treatment effect was found on all depression measures and effects were maintained at 6 months.	Excellent (26)

Author	Design	Active Intervention	Relevant outcome measures	Active Intervention Participants	Control participants	Follow up measures taken	Results	Quality score and qualitative rating
Walker (2004) <i>UK</i>	Case study	CBT (16 sessions with psychologist)	GHQ-28, BSI, CSDD	N = 1 (age 75)	None	1, 3, 6, and 12 months	There was an improvement in all measures following therapy. This was not assessed statistically.	Poor (13)
<i>Stroke</i>								
Lincoln & Flannaghan (2003) <i>UK</i>	RCT	CBT (mean 10 sessions with CPN)	BDI, WDI	N = 39 (mean age 67)	Attention placebo (n = 43; mean age 66) Standard care (n = 41; mean age 65)	3 and 6 months	There was an improvement in mood after 6 months but there were no significant differences between the three groups.	Good (20)
Lincoln et al. (1997) <i>UK</i>	Observational (before and after)	CBT (mean 8 sessions with CPN or assistant psychologist)	BDI, HADS, WDI	N= 19 (mean age 67)	None	None	Significant decrease in BDI scores following CBT. Improvement as measured by the HADS and WDI did not reach statistical significance.	Good (16)
Mitchell et al. (2009) <i>USA</i>	RCT	Psychosocial-behavioural intervention (9 sessions with nurse)	GDS-30, HAM-D	N = 47 (mean age 57)	TAU (n = 53; mean age 57)	9 weeks, 6, 12 and 24 months	Behavioural intervention with antidepressant was more effective at reducing depression than antidepressant alone.	Excellent (25)

Author	Design	Active Intervention	Relevant outcome measures	Active Intervention Participants	Control participants	Follow up measures taken	Results	Quality score and qualitative rating
Rasquin et al. (2009) <i>The Netherlands</i>	Case series	CBT (8 sessions, with clinical psychologist)	BDI-II, SCL-D, CLCE-24, visual analogue scale	N = 5 (mean age 46)	None	1 and 3 months	CBT was found to be acceptable and feasible. Three of the five participants showed significant improvements on the BDI-II	Poor (12)
Thomas et al. (2012) <i>UK</i>	RCT	BT (mean 9 sessions, with assistant psychologist)	SADQ, visual analogue mood scales	N= 51 (mean age 68)	TAU (n = 54; mean age 65)	3 and 6 months	BT improved mood. The treatment group made significantly greater reductions in SADQ scores than the control group, which were maintained at follow up.	Good (20)
<i>Parkinson's Disease</i>								
Cole & Vaughan (2005) <i>UK</i>	Case series	CBT (7 sessions with clinical psychologist)	GDS-15, BDI-II	N = 5 (mean age 73)	None	One month	There was a clinically significant reduction in GDS-15 scores for 4 patients and a reduction in BDI-II scores for 2 patients.	Poor (12)
Dobkin et al. (2006) <i>USA</i>	Case series	CBT (12 – 14 sessions with a clinical psychologist)	HAM-D, BDI	N = 3 (mean age 62)	None	One month	All three patients observed a clinically significant decrease in depression scores (up to a 50% reduction).	Poor (12)

Author	Design	Active Intervention	Relevant outcome measures	Active Intervention Participants	Control participants	Follow up measures taken	Results	Quality score and qualitative rating
Dobkin et al. (2007) <i>USA</i>	Observational (before and after study)	CBT (10-14 sessions with a clinical psychologist)	HAM-D, BDI	N = 15 (mean age 65)	None	One month	Significant decrease in BDI and HAM-D scores (a mean reduction of 10 points on each measure).	Good (20)
Dobkin et al. (2011a) <i>USA</i>	RCT	CBT (10 sessions with clinical psychologists)	HAM-D, BDI	N = 41 (mean age 63)	Clinical monitoring (n = 39; mean age 65)	One month	Significant reductions in HAM-D (mean reduction of 7 points) and BDI scores in CBT group compared to control group	Excellent (25)
Dobkin et al. (2011b) <i>USA</i>	Observational (before and after study)	Telephone CBT (10 sessions with trained clinicians)	HAM-D, BDI	N = 21 (mean age 65)	None	One month	Significant decrease in HAM-D (mean reduction of 8 points) and BDI scores.	Good (20)
Farabaugh et al. (2010) <i>USA</i>	Case series	CBT (12 sessions with psychologist)	HANDS, HAM-D	N = 8 (mean age 63)	None	None	Statistically significant decrease in HAM-D scores (mean reduction of 9 points). Following CBT, 57% achieved remission from depression.	Poor (14)

Author	Design	Active Intervention	Relevant outcome measures	Active Intervention Participants	Control participants	Follow up measures taken	Results	Quality score and qualitative rating
Feeney et al. (2005) <i>Australia</i>	Case series	Group CBT (8 sessions with psychologist)	BDI-II	N = 4 (mean age 65) One group	None	One month	Clinically significant improvement on BDI-II scores for three of the four participants.	Poor (11)
Richardson & Marshall (2012) <i>UK</i>	Case study	CBT (7 sessions with a clinical psychologist)	GDS-15, HADS, CORE-10	N = 1 (age 84)	None	None	Pre and post measures revealed no change on HADS, improvement on GDS-15 and improvement on CORE-10.	Poor (10)
Veazey et al. (2009) <i>USA</i>	Before and after study (controlled)	Telephone CBT (mean 8 sessions with psychologist)	PHQ-9	N = 5 (mean age 66)	Telephone support (n = 5; mean age 75)	One month	Feasibility of telephone CBT was suggested but there was no significant differences found between CBT and support conditions.	Poor (11)

Abbreviations: BA: behavioural activation; BDI = Beck Depression Inventory; BT: behaviour therapy; CBT: cognitive behaviour therapy, CLCE-24: Checklist for cognitive and emotional consequences following stroke; CORE-10: Clinical Outcomes Routine Evaluation Scale CSDD: Cornell Scale for Depression in Dementia; GDS Geriatric Depression Scale; HADS: Hospital Anxiety and Depression Scale; HAM-D: Hamilton Rating Scale for Depression; HANDS: Harvard National Depression Screening Day Scale; PHQ-9: Patient Health Questionnaire-9; PST = problem solving therapy; RCT: Randomised Controlled Trial; SADQ: Stroke Aphasic Depression Questionnaire; SLC-D: Symptom checklist depression scale; TAU: Treatment as usual; WDI: Wakefield Depression Inventory.

Table 1.3. Quality ratings for included studies.

Study	Design	Question	Population	Controls	Intervention validity	Treatment fidelity	Measures	Statistics	Follow up	Overall Rating
Kiosses et al. (2010)	Well covered	Well covered	Well covered	Adequate	Well covered	Well covered	Adequate	Adequate	Not addressed	Excellent
Scholey & Woods (2003)	Very poor	Adequate	Well covered	Not addressed	Adequate	Adequate	Well covered	Adequate	Not addressed	Poor
Snarski et al. (2011)	Well covered	Well covered	Poor	Well covered	Adequate	Well covered	Well covered	Well covered	Not addressed	Excellent
Teri et al. (1997)	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Adequate	Excellent
Walker (2004)	Very poor	Adequate	Adequate	Not addressed	Poor	Adequate	Well covered	Not addressed	Well covered	Poor
Lincoln & Flannaghan (2003)	Well covered	Adequate	Well covered	Well covered	Adequate	Poor	Adequate	Adequate	Adequate	Good
Lincoln et al. (1997)	Poor	Adequate	Well covered	Not addressed	Adequate	Adequate	Well covered	Well covered	Not addressed	Good
Mitchell et al. (2009)	Well covered	Well covered	Well covered	Well covered	Well covered	Poor	Well covered	Well covered	Well covered	Excellent
Rasquin et al. (2009)	Very poor	Poor	Poor	Not addressed	Well covered	Well covered	Adequate	Poor	Poor	Poor
Thomas et al. (2012)	Well covered	Adequate	Adequate	Well covered	Adequate	Poor	Adequate	Well covered	Adequate	Good
Cole & Vaughan (2005)	Very poor	Poor	Adequate	Not addressed	Adequate	Adequate	Well covered	Poor	Poor	Poor

Study	Design	Question	Population	Controls	Intervention validity	Treatment fidelity	Measures	Statistics	Follow up	Overall Rating
Dobkin et al. (2006)	Very poor	Adequate	Well covered	Not addressed	Well covered	Not addressed	Well covered	Not addressed	Poor	Poor
Dobkin et al. (2007)	Poor	Well covered	Well covered	Not addressed	Well covered	Well covered	Well covered	Well covered	Poor	Good
Dobkin et al. (2011a)	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Well covered	Poor	Excellent
Dobkin et al. (2011b)	Poor	Well covered	Well covered	Not addressed	Well covered	Well covered	Well covered	Well covered	Poor	Good
Farabaugh et al. (2010)	Very poor	Adequate	Well covered	Not addressed	Well covered	Adequate	Adequate	Adequate	Not addressed	Poor
Feeney et al. (2005)	Very poor	Adequate	Adequate	Not addressed	Adequate	Not addressed	Well covered	Poor	Poor	Poor
Richardson & Marshall (2012)	Very poor	Adequate	Adequate	Not addressed	Adequate	Poor	Well covered	Not addressed	Not addressed	Poor
Veazey et al. (2009)	Poor	Adequate	Poor	Poor	Poor	Poor	Adequate	Poor	Poor	Poor

For clarity of presentation, the evidence for CBT based therapies in each of the neurological conditions will be examined separately below. It is useful to delineate the conditions as there may be separate clinical implications for conducting therapy.

Dementia

Participants

The sample sizes of the experimental groups ranged from 1 to 42 participants. The mean ages of the participants ranged from 71 to 80 years. Four of the studies included people with major depressive disorder which was assessed using DSM-IV or ICD-10 criteria. One study (Snarski et al., 2011) comprised participants with mild depression which was rated using the GDS-15.

Intervention

Two studies (Scholey & Woods, 2003; Walker, 2004) carried out CBT in a case series format. The remaining three studies were RCTs and they carried out behaviour therapy (Teri et al., 1997), behavioural activation (Snarski et al., 2011) and problem solving therapy (Kiosses et al., 2010). The interventions were carried out by various professionals including a geriatrician, a psychologist, and graduate psychology students. The mean number of sessions ranged from 8 to 16. Follow up measures were taken in two of the studies (6 months: Teri et al., 1997; 12 months: Walker, 2004).

Outcome measures

All of the studies used standardised outcome measures of depression, including the HAM-D and the GDS. Two studies used the CSDD which is specifically designed to assess for depression in people with dementia.

Results

All five studies reported positive effects of the interventions in terms of reducing depressive symptoms. The three studies that were rated highly on methodological quality were RCTs evaluating behavioural therapies. Overall, they reported significant differences between treatment and control groups. Teri et al. (1997) found large effect sizes and reported that 60 per cent of the participants in the treatment conditions no longer met criteria for depression after six months, compared with 20 per cent of the control participants. Kiosses et al. (2010) noted that the problem solving therapy was significantly more effective than supportive therapy at reducing depressive symptoms. Snarks et al. (2011) showed that for people with mild depression, behavioural activation was more effective than treatment as usual. They reported that 24 per cent of the treatment group demonstrated a clinically significant change, compared with 12 per cent of the control group.

Two papers which used case series or case study designs and were rated lower in methodological quality (Scholey & Woods, 2003; Walker, 2004) reported positive effects of CBT. Scholey and Woods (2003) described a series of eight patients, all of whom showed improvements in depression levels, however, only two of them showed change at a level of clinical significance, as measured by the Reliable Change Index.

In summary, it appears that there is evidence for behavioural therapies in treating depression in people with dementia, as provided by three RCTs. However, despite their robust methodologies, firm conclusions cannot be drawn as there was a lack of consistency regarding the content and delivery of the interventions, the outcome measures used and the homogeneity of the participants. With regard to CBT, it is suggested that it may reduce depressive symptoms, however, the evidence to date has relied on studies of case series design and CBT has not yet been examined empirically in people with dementia.

Stroke

Participants

Across the five studies examining BT or CBT for depression following stroke, sample sizes ranged from 5 to 51. The mean ages of the participants ranged from 46 to 68 years. Three studies were RCTs with control groups who received treatment as usual (Mitchell et al., 2009; Thomas et al., 2012) or an attention placebo (Lincoln & Flannaghan, 2003). Therapy was conducted with participants who had experienced strokes between 1 and 10 months prior to the intervention. Two studies used DSM-IV or ICD-10 criteria for ensuring diagnoses of depression. Three studies used standardised outcome measures to determine the presence of depression.

Intervention

Three of the studies examined CBT (Lincoln & Flannaghan, 2003; Lincoln et al., 1997; Rasquin et al., 2009) and the remaining two examined behavioural therapy

(Mitchell et al., 2009; Thomas et al., 2012). The mean number of sessions ranged from 8 to 10. There was variation in the professional background of the therapists, for example, in two RCTs, the intervention was conducted by Community Psychiatric Nurses (CPNs) (Lincoln & Flannaghan, 2003; Mitchell et al., 2009). In the other studies, the therapy was conducted by Clinical Psychologists or Assistant Psychologists. All but one study (Lincoln et al., 1997) included follow up measures, ranging from 3 to 24 months.

Outcome measures

All of the studies used more than one standardised outcome measures of depression. The most commonly used outcome measure was the BDI. Two studies also used measures specifically designed for assessing depression in people who have experienced stroke (CLCE-24: Rasquin et al., 2009; SADQ: Thomas et al., 2012).

Results

Among the highest quality studies, an RCT examining CBT by Lincoln and Flannaghan (2003) reported no significant differences between the treatment condition and the two control conditions (treatment as usual and an attention placebo) on any depression measures. Whilst relatively highly rated, several factors may have influenced the null effect. For example, both the intervention and the control conditions were delivered by a CPN whose level of training was not adequately described. Additionally, there was little attempt to ensure treatment fidelity such as ensuring supervision was provided and treatment protocols were adhered to. A good quality pilot study by Lincoln et al. (1997) examined CBT in 19 people with stroke and found an overall significant decrease in BDI scores following

therapy. However, no significant differences were found on the other depression outcome measures, namely the HADS and WDI.

There were two RCTs, also rated highly on quality that examined behavioural interventions (Mitchell et al., 2009; Thomas et al., 2012). These studies reported that both treatment and control groups improved over time, however, the treatment groups made significantly more improvements. Mitchell et al. (2009) also carried out longitudinal follow ups and found that remission rates continued up to rise up to two years after therapy. After 12 months the treatment group demonstrated significantly more remission (48%) compared with the control group (27%). At 24 months, the remission rate rose to 65%, however, at this time the difference between groups was no longer significant.

A case series by Rasquin et al. (2009) was rated as poor on methodological quality. This study found that three of the five presented cases showed clinically significant improvements in BDI-II scores.

In summary, results among the five post stroke studies were mixed. All of the studies reported reductions in depressive symptoms over time, however, differences were not always found between treatment and control groups (Lincoln & Flannaghan, 2003). Of the available evidence, it currently appears that behavioural therapies may be more effective than CBT for treating depression in people with stroke, reasons for which will be considered further in the discussion.

Parkinson's disease (PD)

Participants

The sample sizes of the studies ranged from 1 to 41 and the mean ages of the samples ranged from 63 to 84 years. Two of the nine studies included a control group receiving clinical monitoring (Dobkin et al., 2011a) or telephone support (Veazey et al., 2009). Seven studies included participants diagnosed with depression according to DSM-IV criteria whereas two studies used standardised outcome measures such as the PHQ-9 and the GDS in order to determine criteria for depression.

Intervention

In all nine studies, CBT was the treatment used, however, two studies examined telephone CBT (Dobkin et al., 2011b; Veazey et al., 2009) and one study examined group CBT (Feeney et al., 2005). In all studies, the interventions were carried out by Clinical Psychologists. The number of sessions provided ranged from 7 to 14. Seven studies administered follow up measures after one month and the remaining two did not take follow up measures (Farabaugh et al., 2010; Richardson & Marshall, 2012).

Outcome measures

Standardised outcome measures of depression were used in all studies: five studies used the HAM-D; six used the BDI; two used the GDS and one used the PHQ-9.

Results

The methodologically stronger studies demonstrated efficacy of CBT for depression, reporting mean reductions in HAM-D scores ranging from 7 to 10 points, which

were shown to be statistically and clinically significant (Dobkin et al., 2007; Dobkin et al., 2011a; Dobkin et al., 2011b). Dobkin et al.'s (2007) trial reported that 80 per cent of PD patients experienced significant reductions in depressive symptoms. Despite lacking a control group, this study was well conducted and provides a compelling suggestion that CBT is effective for people with PD. Following from this study, Dobkin et al. (2011a) conducted an RCT which replicated the previous positive findings. Significant differences in depressive symptoms between the treatment and control group were reported (mean HAM-D reductions of 7 and 0 respectively). Dobkin et al. (2011b) also noted that telephone CBT may be useful for this population due to the likelihood of physical disability which may make travelling to a clinic more difficult. In their uncontrolled trial, they reported significant reductions in depressive symptoms following telephone CBT.

Five studies, rated lower in quality, used case series designs. Together, they contained a total of 21 participants and overall, symptoms of depression reduced following therapy. However, two of these studies reported mixed results. For example, Richardson and Marshall (2012) found that although participants' scores improved on the GDS-15 and CORE-10, there was no change on the HADS pre and post therapy. Similarly, Cole and Vaughan (2005) found a reduction in GDS-15 scores in four of the five participants, but only two participants showed clinically significant reductions in BDI-II scores. Although these outcome measures are valid and standardised for use with the general population, it is important to consider their differences and determine the most appropriate measures for using with people with PD. Another lower quality study (Veazey et al., 2009) compared telephone CBT with telephone support and in contrast to the positive results found by Dobkin et al.

(2011b), they found no significant differences between groups. However, this study lacked clarity on the content and delivery of the intervention therefore making it difficult to ensure that the CBT was appropriately conducted. Additionally, their sample comprised male veterans and is therefore not representative of the population of people with PD.

In summary, three higher quality studies and five lower quality studies all reported positive effects of CBT in the treatment of depression and one study (Veazey et al., 2009) found no effect of CBT. Although it has been shown that CBT may reduce depressive symptoms, many of the included studies did not have control groups and the longest length of follow up was only one month. Nevertheless, there is compelling preliminary evidence that CBT may be beneficial for people with PD and this should be examined further by RCTs which include longitudinal follow ups.

Overall Results

Three neurological conditions were examined in this systematic review, which included five papers examining dementia, five examining stroke and nine examining PD. Across all conditions, there are suggestions that CBT based interventions are feasible and effective for the treatment of depression. With regard to dementia, there is a lack of evidence for the effectiveness of CBT, though there is more robust evidence for the role of behavioural therapies and adaptations of CBT including problem solving therapy. Similarly, within the stroke literature, there is insufficient evidence for CBT, however, more promising evidence for the role of behavioural interventions. Compared with dementia and stroke, there has been more research examining CBT for people with PD. There was also less variability within the PD

studies included in this review. For example, all nine studies examined CBT, their interventions were similar in terms of number and duration of sessions, content of sessions and therapists' level of training (all Clinical Psychologists). There is good preliminary evidence to suggest that CBT for depression for people with PD may be effective, however five of the studies were case-series and none of the studies provided follow-up data beyond one month.

Discussion

The aim of this systematic review was to examine the evidence for cognitive and behavioural therapies in the treatment of depression in neurological conditions common in older adults. Overall, there are some consistent findings suggesting that CBT and behaviourally based approaches may be effective in the reduction of depressive symptoms. However, to date there has been little attention paid to this area of research and as such, the available evidence is preliminary.

Methodological Limitations in Reviewed Literature

There are a number of methodological limitations which must be taken into consideration when examining the results of the studies included in this review. There was heterogeneity regarding the interventions, including the number and duration of sessions. For example, most provided an average of 8 to 10 sessions. CBT can typically require 16 to 20 sessions, particularly for moderate to severe depression (NES, 2011). This may also be the case for people with neurological conditions as individuals' cognitive impairment may necessitate a slower pace of therapy with more repetition. Some of the papers included in this review noted in

their discussions that the 'dose' of therapy might not have been enough to show significant changes (Lincoln & Flannaghan, 2003).

The studies also varied in content and delivery of the interventions. Many studies only partially addressed treatment fidelity, for example, ensuring protocols were followed and that therapists received supervision. In clinical practice it may be that therapists work eclectically, and indeed a core component of CBT is an idiosyncratic formulation thus requiring a degree of adaptation. However, it has been suggested that for research purposes, consistency and structure is needed in order to ensure validity and reliability and therefore accurately assess efficacy of treatment (Firth, 2013).

The use of outcome measures also varied. Some studies only used one measure of depression and of those that used more than one, some studies found mixed results depending on which outcome measure was used. Additionally, ten studies used the BDI, which has been reported to be confounded by medical illnesses due to its presence of somatic symptom items (Thombs et al., 2010). Therefore, the BDI may not be the most appropriate measure for using with older people with neurological conditions, many of whom will be more likely to have co-morbid physical symptoms. Results from self report questionnaires can also be confounded by cognitive impairment therefore some studies, examining stroke and dementia, used objective measures specifically designed for these populations. The studies examining PD did not use outcome measures specifically designed for people with PD and it has been suggested that measures such as the Montgomery-Ashberg Depression Rating Scale (MADRS; Snaith, Harrop, Newby & Teale, 1986) are used

to assess for depression in PD (Yang et al., 2012). Additionally, it has been suggested that higher cut off scores in standardised outcome measures could be used to assess for depression in people with PD (e.g. Visser, Leentjens, Marinus, Stiggelbout & van Hilten, 2006).

There are various other methodological design issues that may affect the quality of the evidence for CBT based therapies in the three neurological conditions. Eight studies used case series designs, which are considered as poor quality evidence due to the high risk of author bias. Small sample sizes also reduce generalisability of results. Longitudinal follow up data is important to gather when conducting research examining efficacy of interventions. Only two studies reported follow up information longer than 12 months: in the case study by Walker (2004) lasting treatment effects were reported at 12 months but in an RCT by Mitchell et al. (2009), no significant differences were found between groups after 24 months. Further research with long term follow-ups will help clarify whether outcomes are maintained and provide important information on cost effectiveness. It may be particularly interesting to examine this in people with neurological conditions, as some of these conditions will be progressive.

Clinical Implications

There are important clinical implications with regard to providing psychological therapy to older people with neurological conditions. Given their increased risk of depression and the significant effects that depression can have on the prognosis of the neurological condition, it is essential to find effective treatments. Often, there are more complications associated with anti-depressant medication in this population,

therefore psychological therapies such as CBT have the potential to be applicable and beneficial.

CBT versus Behaviour Therapy

From the results of this systematic review, there appears to be stronger evidence for the role of behavioural interventions than CBT in treating depression amongst those with dementia or stroke. Nevertheless, there is evidence indicating that CBT enables reductions in depressive symptoms amongst those with PD, at least at one month post intervention. Several reasons may account for this. Firstly, design issues and heterogeneity of the interventions may have affected the results. There was less variation among the PD papers and the CBT was conducted by Clinical Psychologists. Whereas the studies examining CBT for people with stroke and dementia, the training of the therapist and the use of a treatment protocol was not always clear.

Secondly, researchers may have defaulted to examining the role of behavioural therapies in people with dementia and stroke. Participants with these conditions were more likely to have cognitive impairment, therefore, it may be that behavioural interventions were easier to implement and for participants to understand. Within the stroke literature, effectiveness of CBT has not been fully demonstrated. However, in the research studies, CBT was not adapted to account for cognitive deficits and it has been suggested that augmented CBT that is individualised for post stroke depression ought to be more effective (Broomfield et al., 2011). CBT has yet to be fully evaluated within these conditions.

Thirdly, some researchers have suggested that CBT is no more effective than its behavioural components alone and have thus questioned the need for cognitive modifications (Longmore & Worrell, 2007). This, however, is still up for debate and the underlying mechanisms of change in CBT remain unclear (Hoffman & Smits, 2008).

Strengths and limitations of current review

In contrast to previous reviews examining psychological therapies for people with conditions including dementia (e.g. O'Connor, Ames, Gardner & King, 2009), this review is the first to focus on the role of CBT in the treatment of depression. It is also beneficial to obtain an overarching view of the evidence for a range of neurological conditions. Another strength of this review is that the papers were rated independently by two reviewers in order to increase reliability of the quality ratings.

This review is limited by the fact that only published studies were included and they were limited to papers written in English. Publication bias is a common limitation when conducting systematic reviews (Parekh-Bhurke et al., 2011). However, the current review did include several high quality papers that reported non-significant findings. Another limitation is that the inclusion and exclusion criteria, which attempted to reduce heterogeneity and increase ability to compare papers, may have excluded potentially informative research papers.

Future research

The emerging evidence for CBT based therapies for people with neurological conditions suggests that BT may be efficacious for dementia and CBT may be

efficacious for people with PD. Insufficient evidence was found for CBT for post stroke depression. However, it would be hypothesised that CBT would be effective for post stroke depression if CBT has shown efficacy for people with dementia and PD, given that there are many similarities among these three conditions.

Further research should include control conditions receiving alternative supportive therapies will also help to ascertain whether there are effects of CBT or whether effects are due to non specific factors such as the therapeutic relationship. Longitudinal follow ups are also essential to determine efficacy over time. Further research could focus on ascertaining how much CBT is affected by mild cognitive impairment. Many of the interventions in the included studies were adapted to suit the needs of the client group. It will be worth determining if and what adaptations are required when conducting therapy with people with neurological conditions.

Overall conclusions

In summary, this systematic review has collated the evidence for the efficacy of CBT based interventions in the treatment of depression in people with dementia, stroke and PD. The evidence to date suggests that behavioural therapies are efficacious in the treatment of depression in dementia and that CBT may be efficacious for people with PD. The evidence for CBT in post stroke depression is currently insufficient, therefore, further research is needed. The available research has several methodological limitations and as such, further high quality randomised controlled trials are required. Despite this, there are preliminary indications that CBT based therapies may be efficacious for people with neurological conditions common in late life.

References

- Assogna, F., Fagioli, S., Cravello, L., Meco, G., Pierantozzi, M., Stefani, A., et al. (2013). Depressive symptoms in Parkinson's disease and in non-neurological medical illnesses. *Neuropsychiatric Disease and Treatment*, 13(9), 389-396.
- Bains, J., Birks, J. S., & Denning, T. D. (2002). Antidepressants for treating depression in dementia. *Cochrane Database of Systematic Reviews*, 4.
- Banerjee, S., Baldwin, R., Ballard, C., Benthall, P., Burns, A., Dewey, M., et al. (2013). Study of the use of antidepressants for depression in dementia: The HTA-SADD trial-a multicentre, randomised, double-blind, placebo-controlled trial of the clinical effectiveness and cost-effectiveness of sertraline and mirtazapine. *Health Technology Assessment*, 17(7)
- Beltman, M. W., Voshaar, R. C. O., & Speckens, A. E. (2010). Cognitive-behavioural therapy for depression in people with a somatic disease: Meta-analysis of randomised controlled trials. *The British Journal of Psychiatry*, 197(1), 11-19.
- Blazer, D. G. (2003). Depression in late life: Review and commentary. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 58(3), M249-M265.
- Brommelhoff, J. A., Gatz, M., Johansson, B., McArdle, J. J., Fratiglioni, L., & Pedersen, N. L. (2009). Depression as a risk factor or prodromal feature for

dementia? Findings in a population-based sample of Swedish twins. *Psychology and Aging*, 24(2), 373-384.

Broomfield, N. M., Laidlaw, K., Hickabottom, E., Murray, M. F., Pendrey, R., Whittick, J. E., et al. (2011). Post-stroke depression: The case for augmented, individually tailored cognitive behavioural therapy. *Clinical Psychology & Psychotherapy*, 18(3), 202-217.

Burn, D. J. (2002). Beyond the iron mask: Towards better recognition and treatment of depression associated with Parkinson's disease. *Movement Disorders*, 17(3), 445-454.

Burns, A., Guthrie, E., Murino-Francis, F., Busby, C., Morris, J., Russell, E., et al. (2005). Brief psychotherapy in Alzheimer's disease: Randomised controlled trial. *British Journal of Psychiatry*, 187, 143-147.

Charidimou, A., Seamons, J., Selai, C., & Schrag, A. (2011). The role of cognitive-behavioural therapy for patients with depression in Parkinson's disease. *Parkinson's Disease*,

Cheston, R., Jones, K., & Gilliard, J. (2003). Group psychotherapy and people with dementia. *Aging and Mental Health*, 7(6), 452-461.

Cole, K., & Vaughan, F. L. (2005). Brief cognitive behavioural therapy for depression associated with Parkinson's disease: A single case series. *Behavioural and Cognitive Psychotherapy*, 33(1), 89-102.

- CRD. (2008). *Systematic review: CRDs guidance for undertaking reviews in health care*. University of York: CRD.
- Cuijpers, P., van Straten, A., Smit, F., & Andersson, G. (2009). Is psychotherapy for depression equally effective in younger and older adults? A meta-regression analysis. *International Psychogeriatrics*, 21(01), 16-24.
- Dobkin, R. D., Allen, L. A., & Menza, M. (2006). A cognitive-behavioral treatment package for depression in Parkinson's disease. *Psychosomatics*, 47(3), 259-263.
- Dobkin, R. D., Allen, L. A., & Menza, M. (2007). Cognitive-behavioral therapy for depression in Parkinson's disease: A pilot study. *Movement Disorders*, 22(7), 946-952.
- Dobkin, R. D., Menza, M., Allen, L. A., Gara, M. A., Mark, M. H., Tiu, J., et al. (2011a). Cognitive-behavioral therapy for depression in Parkinson's disease: A randomized controlled trial. *American Journal of Psychiatry*, 168(10), 1066-1074.
- Dobkin, R. D., Menza, M., Allen, L. A., Tiu, J., Friedman, J., Bienfait, K. L., et al. (2011b). Telephone-based cognitive-behavioral therapy for depression in Parkinson disease. *Journal of Geriatric Psychiatry and Neurology*, 24(4), 206-214.
- Fann, J. R., Hart, T., & Schomer, K. G. (2009). Treatment for depression after traumatic brain injury: A systematic review. *Journal of Neurotrauma*, 26(12), 2383-2402.

- Farabaugh, A., Locascio, J. J., Yap, L., Growdon, J., Fava, M., Crawford, C., et al. (2010). Cognitive-behavioral therapy for patients with Parkinson's disease and comorbid major depressive disorder. *Psychosomatics*, 51(2), 124-129.
- Feeney, F., Egan, S., & Gasson, N. (2005). Treatment of depression and anxiety in Parkinson's disease: A pilot study using group cognitive behavioural therapy. *Clinical Psychologist*, 9(1), 31-38.
- Firth, N. (2013). Effectiveness of psychologically focused group interventions for multiple sclerosis: A review of the experimental literature. *Journal of Health Psychology*. DOI: 1359105313479630.
- Gellis, Z. D., McClive-Reed, K. P., & Brown, E. L. (2009). Treatments for depression in older persons with dementia. *Annals of Long-Term Care*, 17(2), 29-36.
- Ghazi-Noori, S., Chung, T. H., Deane, K. H. O., Rickards, H., & Clarke, C. E. (2003). Therapies for depression in Parkinson's disease. *Cochrane Database of Systematic Reviews*, 3.
- Gibbons, L. E., Teri, L., Logsdon, R., McCurry, S. M., Kukull, W., Bowen, J., et al. (2002). Anxiety symptoms as predictors of nursing home placement in patients with Alzheimer's disease. *Journal of Clinical Geropsychology*, 8(4), 335-342.
- González-Salvador, M. T., Arango, C., Lyketsos, C. G., & Barba, A. C. (1999). The stress and psychological morbidity of the Alzheimer patient caregiver. *International Journal of Geriatric Psychiatry*, 14(9), 701-710.

- Gould, R. L., Coulson, M. C., & Howard, R. J. (2012). *Journal of the American Geriatric Society*, 60, 1817-1830.
- Hackett, M. L., Anderson, C. S., House, A., & Xia, J. (2008). Interventions for treating depression after stroke. *Cochrane Database of Systematic Reviews*, 4.
- Halford, J., & Brown, T. (2009). Cognitive–behavioural therapy as an adjunctive treatment in chronic physical illness. *Advances in Psychiatric Treatment*, 15(4), 306-317.
- Hassiotis, A., Serfaty, M., Azam, K., Strydom, A., Blizard, R., Romeo, R., et al. (2013). Manualised individual cognitive behavioural therapy for mood disorders in people with mild to moderate intellectual disability: A feasibility randomised controlled trial. *Journal of Affective Disorders*. DOI: 10.1016/2013.05.076
- Hoe, J., Hancock, G., Livingston, G., & Orrell, M. (2006). Quality of life of people with dementia in residential care homes. *The British Journal of Psychiatry*, 188(5), 460-464.
- Hofmann, S. G., & Smits, J. A. J. (2008). Cognitive-behavioral therapy for adult anxiety disorders: A meta-analysis of randomized placebo-controlled trials. *Journal of Clinical Psychiatry*, 69, 621-632.
- Jorm, A. F. (2000). Does old age reduce the risk of anxiety and depression? A review of epidemiological studies across the adult life span. *Psychological Medicine*, 30(01), 11-22.
- Kaufman, G. (2011). Polypharmacy in older adults. *Nursing Standard*, 25(38), 49-55.

- Kiosses, D. N., Arean, P. A., Teri, L., & Alexopoulos, G. S. (2010). Home-delivered problem adaptation therapy (PATH) for depressed, cognitively impaired, disabled elders: A preliminary study. *American Journal of Geriatric Psychiatry*, 18(11), 988-998.
- Kneebone, I. I., & Dunmore, E. (2000). Psychological management of post-stroke depression. *British Journal of Clinical Psychology*, 39(Pt 1), 53-65.
- Kneebone, I. I., & Lincoln, N. B. (2012). Psychological problems after stroke and their management: State of knowledge. *Neuroscience and Medicine*, 3, 83-89.
- Kootker, J. A., Fasotti, L., Rasquin, S. M. C., van Heugten, C. M., & Geurts, A. C. H. (2012). The effectiveness of an augmented cognitive behavioural intervention for post-stroke depression with or without anxiety (PSDA): The Restore4Stroke-PSDA trial. *BMC Neurology*, 12(1), 51.
- Laidlaw, K., Thompson, L. W., & Gallagher-Thompson, D. (2004). Comprehensive conceptualization of cognitive behaviour therapy for late life depression. *Behavioural and Cognitive Psychotherapy*, 32(4), 389-399.
- Leentjens, A. F. G. (2004). Depression in Parkinson's disease: Conceptual issues and clinical challenges. *Journal of Geriatric Psychiatry and Neurology*, 17(3), 120-126.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., et al. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *British Medical Journal*, 21, 339-b2700.

- Lincoln, N. B., & Flannaghan, T. (2003). Cognitive behavioural psychotherapy for depression following stroke. A randomised controlled trial. *Stroke*, 34, 111-115.
- Lincoln, N. B., Flannaghan, T., Sutcliffe, L., & Rother, L. (1997). Evaluation of cognitive behavioural treatment for depression after stroke: A pilot study. *Clinical Rehabilitation*, 11, 114-122.
- Longmore, R. J., & Worrell, M. (2007). Do we need to challenge thoughts in cognitive behavior therapy? *Clinical Psychology Review*, 27(2), 173-187.
- Luengo-Fernandez, R., Leal, J., & Gray, A. (2010). *Dementia 2010: The economic burden of dementia and associated research funding in the United Kingdom*. Cambridge: Alzheimer's Research Trust.
- Lyketsos, C. G., & Olin, J. (2002). Depression in Alzheimer's disease: Overview and treatment. *Biological Psychiatry*, 52, 243-252.
- Macht, M., Pasqualini, M. S., & Taba, P. (2007). Cognitive-behavioral strategies for Parkinson's disease: A report of three cases. *Journal of Clinical Psychology in Medical Settings*, 14(2), 165-176.
- Menza, M., Dobkin, R. D., Marin, H., Mark, M. H., Gara, M., Buyske, S., et al. (2009). The impact of treatment of depression on quality of life, disability and relapse in patients with Parkinson's disease. *Movement Disorders*, 24(9), 1325-1332.
- Mitchell, P. H., Veith, R. C., Becker, K. J., Buzaitis, A., Cain, K. C., Fruin, M., et al. (2009). Brief psychosocial-behavioural intervention with antidepressant reduces

post stroke depression significantly more than usual care with antidepressant.

Stroke, 40, 3073-3078.

Misayaki, J. M., Shannon, K., Voon, V., Ravina, B., Kleiner-Fisman, G., Anderson, K., et al. (2006). Practice parameter: Evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review) report of the quality standards subcommittee of the American academy of neurology. *Neurology*, 66(7), 996-1002.

Mohr, D. C., Boudewyn, A. C., Goodkin, D. E., Bostrom, A., & Epstein, L. (2001). Comparative outcomes for individual cognitive-behavior therapy, supportive-expressive group psychotherapy, and sertraline for the treatment of depression in multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 69(6), 942.

National Institute of Clinical Evidence. (October 2009). *Depression: The treatment and management of depression in adults*

NES. (2011). *The matrix. mental health in Scotland: A guide to delivering evidence-based psychological therapies in Scotland*

O'Connor, D. W., Ames, D., Gardner, B., & King, M. (2009). Psychosocial treatments of psychological symptoms in dementia: A systematic review of reports meeting quality standards. *International Psychogeriatrics*, 21(2), 241-251.

Parekh-Bhurke, S., Kwok, C. S., Pang, C., Hooper, L., Loke, Y. K., Ryder, J. J., et al. (2011). Uptake of methods to deal with publication bias in systematic reviews

has increased over time, but there is still much scope for improvement. *Journal of Clinical Epidemiology*, 64(4), 349-357.

Paukert, A. L., Calleo, J., Kraus-Schuman, C., Snow, L., Wilson, N., Petersen, N. J., et al. (2010). Peaceful mind: An open trial of cognitive-behavioral therapy for anxiety in persons with dementia. *International Psychogeriatrics*, 22(6), 1012-1021.

Pinquart, M., Duberstein, P. R., & Lyness, J. M. (2007). Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. *Aging & Mental Health*, 11(6), 645-657.

Raskind, M. A. (2008). Diagnosis and treatment of depression comorbid with neurologic disorders. *The American Journal of Medicine*, 121, S28-S37.

Rasquin, S. M., Van De Sande, P., Praamstra, A. J., & Van Heugten, C. M. (2009). Cognitive-behavioural intervention for depression after stroke: Five single case studies on effects and feasibility. *Neuropsychological Rehabilitation*, 19(2), 208-222.

Reijnders, J. S. A. M., Ehrt, U., Weber, W. E. J., Aarsland, D., & Leentjens, A. F. G. (2008). A systematic review of prevalence studies of depression in Parkinson's disease. *Movement Disorders*, 23(2), 183-189.

Richardson, T., & Marshall, A. (2012). Cognitive behavioural therapy for depression in advanced Parkinson's disease: A case illustration. *The Cognitive Behaviour Therapist*, 5, 60-69.

- Rickards, H. (2005). Depression in neurological disorders: Parkinson's disease, multiple sclerosis, and stroke. *Neurology in Practice*, 76(1), 48-52.
- Rickards, H. (2006). Depression in neurological disorders: An update. *Current Opinion in Psychiatry*, 19(3), 294-298.
- Robinson, R. G., Jorge, R. E., Moser, J. D., Acion, L., Solodkin, A., Small, S. L., et al. (2008). Escitalopram and problem solving therapy for prevention of post stroke depression. *Journal of American Medical Association*, 299(20), 2391-2400.
- Rodda, J., Walker, Z., & Carter, J. (2011). Depression in older adults. *BMJ*, 343.
- Scholey, K. A., & Woods, B. T. (2003). A series of brief cognitive therapy interventions with people experiencing both dementia and depression: A description of techniques and common themes. *Clinical Psychology and Psychotherapy*, 10, 175-185.
- Scottish Intercollegiate Guidelines Network. (November 2011). *SIGN 50: A guideline developer's handbook* (Revised ed.). Edinburgh: SIGN Executive.
- Slaughter, J. R., Slaughter, K. A., Nichols, D., Holmes, S. E., & Martens, M. P. (2001). Prevalence, clinical manifestations, etiology, and treatment of depression in Parkinson's disease. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 13(2), 187-196.

- Snaith, R. P., Harrop, F. M., Newby, T. D. A., & Teale, C. (1986). Grade scores of the montgomery-åberg depression and the clinical anxiety scales. *The British Journal of Psychiatry*,
- Snarski, M., Scogin, F., DiNapoli, E., Presnell, A., McAlpine, J., & Marcinak, J. (2011). The effects of behavioral activation therapy with inpatient geriatric psychiatry patients. *Behavior Therapy*, 42(1), 100-108.
- Spector, A., Orrell, M., Lattimer, M., Hoe, J., King, M., Harwood, K., et al. (2012). Cognitive behavioural therapy (CBT) for anxiety in people with dementia: Study protocol for a randomised controlled trial. *Trials*, 13(1), 197.
- Sutcliffe, C., Burns, A., Challis, D., Mozley, C. G., Cordingley, L., Bagley, H., et al. (2007). Depressed mood, cognitive impairment, and survival in older people admitted to care homes in England. *American Journal of Geriatric Psych*, 15(8), 708-715.
- Teri, L. (1994). Behavioral treatment of depression in patients with dementia. *Alzheimer Disease & Associated Disorders*, 8(Suppl 3), 66-74.
- Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioral treatment of depression in dementia patients: A controlled clinical trial. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences*, 52(4), P159-66.
- Thomas, S. A., Walker, M. F., MacNiven, J. A., Haworth, H., & Lincoln, N. B. (2012). Communication and low mood (CALM): A randomised controlled trial

of behavioural therapy for stroke patients with aphasia. *Clinical Rehabilitation*, 27(5), 398-408.

Thombs, B. D., Ziegelstein, R. C., Pilote, L., Dozois, D. J. A., Beck, A. T., Dobson, K. S., et al. (2010). Somatic symptom overlap in beck depression inventory-II scores following myocardial infarction. *The British Journal of Psychiatry*, 197, 61-66.

Veazey, C., Cook, K. F., Stanley, M., Lai, E. C., & Kunik, M. E. (2009). Telephone-administered cognitive behavioral therapy: A case study of anxiety and depression in Parkinson's disease. *Journal of Clinical Psychology in Medical Settings*, 16(3), 243-253.

Visser, M., Leentjens, A. F. G., Marinus, J., Stiggelbout, A. M., & van Hilten, J. J. (2006). Reliability and validity of the beck depression inventory in patients with Parkinson's disease. *Movement Disorders*, 21(5), 668-672.

Walker, D. A. (2004). Cognitive behavioural therapy for depression in a person with Alzheimer's dementia. *Behavioural and Cognitive Psychotherapy*, 32(04), 495-500.

Watkins, C. L., Auton, M. F., Deans, C. F., Dickinson, H. A., Jack, C. I. A., Lightbody, C. E., et al. (2007). Motivational interviewing early after acute stroke a randomized controlled trial. *Stroke*, 38(3), 1004-1009.

Wilkins, V. M., Kiosses, D., & Ravdin, L. D. (2010). Late-life depression with comorbid cognitive impairment and disability: Nonpharmacological interventions. *Clinical Interventions in Aging*, 5, 323-331.

Williams, L. S., Kroenke, K., Bakas, T., Plue, L. D., Brizendine, E., Tu, W., et al. (2007). Care management of post stroke depression a randomized, controlled trial. *Stroke*, 38(3), 998-1003.

Yang, S., Sajatovic, M., & Walter, B. L. (2012). Psychosocial interventions for depression and anxiety in Parkinson's disease. *Journal of Geriatric Psychiatry and Neurology*, 25(2), 113-121.

PART II – EMPIRICAL RESEARCH STUDY

Chapter 2: Extended Methodology

This chapter presents an extended outline of the methodology, including the design, the participants, ethical considerations, the measures used, and an overview of the statistical analyses used in this study.

Design

This study used a cross-sectional design in order to explore attitudes to ageing in a clinically depressed older adult population. Between subjects analyses were carried out to compare the clinically depressed group with non depressed controls, and correlational analyses were conducted to determine associations among the measures within the clinically depressed sample.

Participants

The study comprised two groups of participants: a clinically depressed group and a control group.

Clinically depressed group

Inclusion criteria were: aged over 60 years, a diagnosis of depression and a score of five or above on the GDS-15. Participants were also receiving care from a community mental health team (CMHT). Exclusion criteria were: a diagnosis of dementia or other cognitive impairment, substance misuse and psychosis. Participants were recruited through clinicians working in CMHTs, including:

Clinical Psychologists, CPNs, OTs, Social Workers, Support Workers, Guided Self Help Workers and Psychiatrists. Clinicians then offered questionnaire packs to all patients on their caseloads who met the inclusion and exclusion criteria. Questionnaire packs included a participant information sheet (Appendix 6), seven self report questionnaires and a stamped addressed envelope to return the questionnaires to the researcher anonymously. Potential participants were advised to read the information sheet if they were interested in taking part, and if so, complete the questionnaires and return to the researcher anonymously. In total, 220 questionnaire packs were distributed to clinicians working in NHS Highland and 150 were distributed to clinicians working in NHS Grampian. In total, 31 questionnaire packs were returned. It was not possible to determine how many packs clinicians handed out therefore an accurate response rate was not calculated. Of the 31 packs returned, three participants scored under five on the GDS-15 therefore, they were removed from the clinically depressed group as they did not meet the inclusion criteria.

Control Group

The sample of control participants was accessed through existing data held from a sample of healthy older adults in the community, who participated in the WHOQOL/AAQ field trial (Laidlaw et al., 2007). Control participants had already completed measures including the AAQ, the GDS-30 and a demographic questionnaire. They also answered two additional questions: Rate quality of life (1-5) and rate satisfaction with health (1-5). Their scores on the GDS-30 were pro-rated to correspond with the scores on the shorter GDS-15. This was done by removing

responses from 15 of the questions on the GDS-30. The remaining 15 questions were identical to those in the GDS-15.

Within the control sample, there were 15 participants who scored above five on the GDS-15, indicating depressed mood. These participants were removed for the initial comparison between clinically depressed and non depressed participants. They were included again for the correlational analyses examining level of depression and attitudes to ageing.

Ethical Approval

Ethical approval was granted by the North of Scotland Research Ethics Committee (Appendix 3). Approval was also granted by the Research and Development Departments in NHS Highland and NHS Grampian (Appendices 4 & 5).

Ethical Considerations

Informed consent

This study only included participants who were able to provide informed consent to take part. Each potential participant was provided with an information sheet and had the opportunity to contact the researcher with any questions. Since participants were provided with questionnaire packs and were able to return them anonymously, informed consent was assumed by the returning of the completed questionnaires. Undue pressure to participate was reduced as neither the researcher nor the clinicians

who distributed the packs were aware as to whether or not their patients returned the questionnaires.

Potential distress to participants

It was acknowledged that some of the participants may have found some of the questionnaires distressing as they were asking about their emotions. Participants were aware that they did not have to answer all of the questions and they were able to stop at any time. All participants had a clinician in the CMHT involved in their care and they were encouraged to contact them if they were to become distressed.

Confidentiality

All results were anonymous therefore no patient identifiable information was stored as part of this study, ensuring confidentiality. Questionnaire packs that were returned were given a unique identification number and were stored securely.

Measures

Demographic information

Information was collected by means of a questionnaire on: age, gender, marital status, employment status, living arrangements, educational level and health status. Participants also completed two questions rated on a 5-point Likert scale: rating quality of life and rating satisfaction with health.

Attitudes to Ageing Questionnaire (AAQ; Laidlaw et al., 2007)

The AAQ was developed in collaboration with the World Health Organisation (WHO) as part of an international project on the development of Quality of Life measures for use with older adults. The AAQ comprises 24 self report items which incorporate the concepts of both losses and gains with regard to ageing. Factor analysis and structural equation modelling were used during the development of the AAQ and three distinct subscales were determined: (1) Psychosocial Loss; (2) Physical Change; and (3) Psychological Growth. The psychosocial loss subscale measures the negative experiences of ageing in relation to psychological and social loss. Physical change relates to the experience of ageing in terms of physical health. Psychological growth focuses on the positive aspects of ageing and could be summarised as ‘personal wisdom’.

The AAQ contains questions relating to general attitudes about ageing and also questions that relate to a more personal experience of individuals’ own ageing. The AAQ has several advantages over previous scales. For example, it was specifically designed for use with older people, it has been tested in large samples worldwide, and provides an insight into the subjective experience of ageing, both positive and negative.

The 24 items of the AAQ scale are scored on a 5-point Likert scale (rated from 1= strongly disagree to 5= strongly agree). Scores are totalled and higher scores indicate more positive attitudes to ageing. The minimum score is eight (strongly disagree with all questions) and maximum score is 40 (strongly agree with all questions).

Geriatric Depression Scale – short form (GDS-15; Sheikh & Yesavage, 1986)

The GDS-15 is a widely used standardised measure that was designed for assessing depression in older adults. It is a short version of the 30-item Geriatric Depression Scale (GDS-30; Yesavage et al., 1983). Responses are entered as ‘yes’ or ‘no’ and item scores are totalled to give a minimum of zero and a maximum score of 15. A score of five or above is used as a cut off score to indicate the presence of depression. It has demonstrated high internal reliability (Cronbach alpha 0.75) and good construct validity (Friedman et al., 2005).

Geriatric Anxiety Inventory – short form (GAI-SF; Byrne & Pachana, 2011)

The GAI-SF is a 5-item self report measure of anxiety. It was designed to be a shorter version of the full 20-item GAI and has demonstrated validity and internal consistency (Cronbach’s alpha 0.81). The GAI-SF is not affected by age and it is recommended for use in research studies.

World Health Organisation Quality of Life Questionnaire (WHOQOL-BREF; WHO, 1996)

The WHOQOL–BREF assesses quality of life in four domains: physical health, psychological health, social relationships and environment. It comprises 26 self report items. It was developed as a shorter version of the 100-item WHOQOL measure and has shown good internal consistency with Cronbach’s alpha ranging from 0.62 to 0.82 for the four domains (Skevington et al., 2004). Scores on the WHOQOL-BREF are transformed to scores between 0-100 in order to correlate with the WHOQOL-100. Higher scores indicate higher perceived quality of life. The WHOQOL-BREF is suitable for use with older adults (Lucas-Carrasco et al., 2011).

Prospective and Retrospective Memory Questionnaire (PRMQ; Smith et al., 2000)

The PRMQ is a 16-item self report measure that assesses an individual's subjective memory. It comprises eight items that measure prospective memory, for example, 'Do you decide to do something in a few minutes' time and then forget to do it?' and eight items that measure retrospective memory, for example, 'Do you forget something that you were told a few minutes ago?'. Each item is rated on a five point scale (very often, quite often, sometimes, rarely, never). Each item is given a score between one and five therefore the total scores range from 16 – 80. The PRMQ provides a good measure of everyday memory problems and Crawford et al. (2003) demonstrated its reliability (Cronbach's alpha .89). Additionally, the PRMQ is not affected by age or gender.

Understandability Questionnaire (Law et al., 2010)

The understandability questionnaire was developed to measure the extent to which people endorse the 'understandability phenomenon'. It comprises three attitudinal statements to which respondents rate their agreement on a 7-point Likert scale. The first statement addresses the belief that depression is understandable in old age; the second statement reflects the belief that depression is normal in old age, and the third statement addresses low expectations of effective treatments of late life depression. Lower scores indicate a greater belief that depression is a normal consequence of old age.

Beck Hopelessness Scale (BHS; Beck & Steer, 1988)

The BHS is a measure of hopelessness, in terms of measuring people's negative attitudes. It measures three aspects of hopelessness: feelings about the future, loss of

motivation and expectations. It comprises 20 items which are rated true or false. Scores are summed giving a total score ranging from 0 – 20. The BHS has demonstrated internal reliability (Cronbach's alpha 0.88) in non clinical samples (Steed, 2001).

Analyses, statistical power and sample size calculation

Seven hypotheses were tested in this study and the analysis used for each is presented. SPSS version 19.0 was used to conduct the analyses.

Hypothesis 1: The clinically depressed sample will have significantly more negative attitudes to ageing on the Psychosocial Loss subscale compared to the non depressed control sample.

A one way ANOVA was used to compare the clinically depressed group with the non depressed control group on the AAQ. G*Power (Faul et al., 2007) was used to determine a sample size. Based on a moderate-large effect size (as evidenced in similar studies using the AAQ), with power at 0.8 and alpha at 0.05, G*Power estimated that 32 participants would be required in each group. An ANCOVA was considered to compare groups while controlling for variables that may be influencing AAQ scores. However, significant differences were found between groups on the variables that correlated with the AAQ therefore violating the assumption that the covariates are independent of the experimental effect (Field, 2009). For this reason, an ANCOVA was not conducted.

Hypothesis 2: GDS-15 scores will be a significant predictor of AAQ Psychosocial Loss scores.

A multiple regression model was used to examine how well depression, quality of life and satisfaction with health predict attitudes to ageing. All participants were therefore included in this analysis, including the clinically depressed group ($n = 28$), the depressed controls ($n = 15$) and the non depressed controls ($n = 42$). It is recommended that sample sizes for multiple regression are calculated using the formula: $n = 50 + 8k$, where k is the number of variables entered (Green, 1991). A multiple regression was conducted using three independent variables, therefore using this formula, a sample size of 74 participants was required to obtain power for this analysis. A total of 85 participants were included in the final analysis.

Hypothesis 3: Negative attitudes to ageing will be correlated with poorer quality of life.

Hypothesis 4: Negative attitudes to ageing will be correlated with increased hopelessness.

Hypothesis 5: Negative attitudes to ageing will be correlated with higher endorsement of the understandability phenomenon.

Hypothesis 6: Negative attitudes to ageing will be correlated with increased subjective memory complaints.

Hypothesis 7: Negative attitudes to ageing will be correlated with increased anxiety.

Hypotheses three to seven examined correlations between AAQ and other variables within only the clinically depressed group. Correlational analyses were conducted for

the remaining hypotheses. Cohen's tables (1992) were consulted for obtaining a sample size for this analysis. Assuming a large effect size at power 0.8 and alpha 0.05, a sample size of 28 was required in order to carry out correlations.

Chapter 3: Empirical Research Study

Attitudes to Ageing and Clinical Depression in Older People

Alison Raeburn

Department of Psychological Services (NHS Highland)

Professor Ken Laidlaw

Department of Clinical Psychology (University of East Anglia)

Dr Jim Law

Department of Psychological Services (NHS Highland)

Dr Paul Graham Morris

Clinical & Health Psychology (University of Edinburgh)

*This article has been written in accordance with Psychology and Aging
(Appendix 2)*

Word Count: 6628 (excluding abstract and references)

Abstract

Background: Negative ageing stereotypes are prevalent in society and can have significant effects on older people's attitudes towards their own ageing. Late life depression has been shown to be associated with negative attitudes to ageing and poorer quality of life. However, attitudes to ageing have not yet been explored within a clinical population. The aim of this study was to explore attitudes to ageing within a clinically depressed sample of older adults. **Method:** Twenty eight clinically depressed adults over the age of 65 participated in this study. They were compared with a control sample of non depressed older adults ($n = 42$). All participants completed self report questionnaires including: Attitudes to Ageing Questionnaire, Geriatric Depression Scale and the WHO Quality of Life assessment – Brief version. The clinically depressed participants completed additional measures, including: Geriatric Anxiety Scale, Beck Hopelessness Scale, Prospective and Retrospective Memory Questionnaire, and the 'Understandability' Questionnaire. **Results:** Attitudes to ageing were found to be significantly more negative in the clinically depressed sample compared with non depressed controls. Increased depressive symptoms are associated with negative attitudes to ageing and depression was found to be a significant predictor of negative attitudes relating to psychosocial loss. Negative attitudes to ageing were also correlated with hopelessness, reduced quality of life and lower satisfaction with health. **Conclusion:** These findings are of clinical relevance as attitudes to ageing appear to be mood-state dependent. Therefore, they may be amenable to change through psychological therapies which aim to challenge dysfunctional beliefs. **Keywords:** attitudes, ageing, depression, older people.

Abstract Word Count: 245

Introduction

Demographic changes indicate that life expectancy is rising and birth rates are falling, which is resulting in an ageing population. This unprecedented worldwide demographic change is profound and irreversible (UNFPA, 2012). Currently 1 in 6 of the UK's population are over the age of 65, however, this is set to rise to 1 in 4 by 2035 (Office for National Statistics, 2012). The population of the 'oldest old' (those aged over 85) is projected to rise most quickly, with numbers doubling by 2030 (Laidlaw & Pachana, 2009). There are important implications for this demographic change and this has been reflected in government policies, with recent emphasis on issues regarding the health and well being of older people (Scottish Executive, 2007). This ageing population will present challenges for health care provision (UN, 2009) and it is likely that there will be an increased demand for mental health services for older people. A recent report from the House of Lords stated that the UK is currently underprepared for the ageing population and that changes to societal attitudes regarding ageing are required (HL Paper 140, UK 2013).

Depression in older people

Depression is one of the most common mental health problems in later life (Luppa et al., 2012) and it can have a detrimental impact on an individual's morbidity and mortality (Covinsky et al., 1999). However, depression is often undiagnosed in older people (Alexopoulos, 2005) and they are less likely to receive psychological support than their younger counterparts (Unutzer et al., 2003). One reason for this may be due to negative ageing stereotypes (Linden & Kurtz, 2009). Given the challenges of

old age, such as poorer physical health and losses, depressive symptoms in late life may be interpreted as understandable and an inevitable consequence of ageing (Law et al., 2010). This has been termed the ‘understandability’ phenomenon (Blanchard, 1992). Such beliefs may result in older people being less likely to seek help for their depression (Sarkisian et al., 2003). Another aspect of this phenomenon is that health professionals may hold these beliefs (consciously or subconsciously). Attributing psychological problems to ageing rather than depression can have a significant impact on the efficacy of psychological treatments. For example, if therapists accept older adults’ erroneous beliefs about ageing such as ‘I’m depressed but what should I expect at my age’, this may increase the therapist’s hopelessness since age is unchangeable, and may result in therapy becoming unfocussed and unhelpful (Laidlaw, 2013).

Ageing paradox

Despite an increase in risk factors for depression as people get older, evidence suggests there is a lower frequency of depression in late life than in younger adulthood or middle age (Sadavoy, 2009). Blazer (2010) suggests three protective factors associated with ageing that may explain this apparently paradoxical finding: better emotional regulation skills; increased wisdom; and resilience as older people cope better with stressful life events. Socio-emotional selectivity theory (Carstensen et al., 1999) suggests that as people age, priorities and motivations change with older people placing greater emphasis on goals relating to ensuring current emotional stability such as investing in existing social relationships, rather than on goals relating to the future, such as acquiring knowledge or building new social networks.

As a result, emotional wellbeing and emotional stability improve with age (Carstensen et al., 2011). This is in contrast to previously commonly held beliefs about older people being less likely to benefit from psychotherapy due to being more rigid and 'set in their ways'. Conversely, it seems that older people are more adept at emotion regulation therefore they may be more or as psychologically minded as younger people and thus, equally able to benefit from psychotherapy.

Another factor that may help explain the ageing paradox is that older adults are thought to have increased wisdom (Laidlaw, 2010; 2013), which may be protective against depression. Using their wisdom and life experience may allow older people to better manage stressful life events. In particular, older people are more adept at anticipating potentially stressful life events and therefore minimising negative emotions associated with them (Scheibe & Carstensen, 2010).

Attitudes to ageing

Research has shown that ageing is often viewed in a negative light, being thought of as a time of deterioration, for example, reduced physical and cognitive functioning (Sarkisian et al., 2005). Despite the stereotypes, there is increasing interest in older people's actual experiences of ageing. Diehl and Werner-Wahl (2010) suggest that ageing experiences can be understood by individuals' awareness of age related changes (AARC; Diehl & Werner-Wahl, 2010). They propose that the experience of ageing has less to do with chronological age and more to do with subjective attributions of changes that signify old age. For example, a sense of ageing may

come from the meaning one attributes to noticing a slower processing speed, rather than simply becoming slower.

Levy (2009) suggests that awareness of age related changes may be biased towards the negative aspects of ageing. She proposed that ageing stereotypes are internalised early in childhood due to repeated exposure and societal reinforcement. However, it is only when children become part of the stereotyped group (older adults) that these stereotypes become 'self stereotypes'. Levy (2003) proposes that negative self stereotypes can have a detrimental impact on older adults cognitive and physical functioning. A series of laboratory experiments were conducted involving subliminal priming of age stereotypes in older adults. Positive or negative age stereotype words were flashed on a computer screen, too quickly to allow conscious awareness but slow enough to be perceived. It was found that older adults who were primed with the negative stereotypes subsequently performed worse on cognitive tasks (Levy, 1996; Hess et al., 2002). It was also found that being primed with negative stereotypes affected subjects' gait (Hansdorff et al., 1999); their handwriting (Levy, 2000); their will to live (Levy et al., 2002); and their cardiovascular functioning (Levy et al., 2000). Levy et al. (2002) carried out longitudinal studies and discovered that people with more positive self perceptions of ageing lived on average 7.5 years longer than those who had negative self perceptions of ageing. This was after controlling for a range of factors including physical health. Moser et al. (2011) studied the effects of negative self perceptions of ageing on the risk of adverse outcomes and adaptive living skills. They found a strong association between negative perceptions of ageing and future vulnerability to difficulties with adaptive living skills. Negative self perceptions of ageing have also been found to affect the

likelihood of a person engaging in positive health behaviours (Levy & Myers, 2004; Quinn et al., 2009).

Ageing stereotypes operate both implicitly and explicitly but have been shown to be more negative when operating outwith awareness. Levy (2009) stated that people tend to be unaware and unprepared for negative self stereotypes and therefore do not tend to challenge them when they reach old age. Larzelere et al. (2011) reported that when implicit stereotypes are made explicit (when people become aware that negative self stereotypes have been activated), the effects that Levy and colleagues have shown are not apparent. This is an important finding suggesting that ageism and its effects are preventable and changeable.

Measuring attitudes to ageing

Ageing processes are therefore complex and it is important that there are suitable tools for examining attitudes to ageing since attitudes are known to affect a range of health outcomes (Bryant et al., 2012), including changes in mood, behaviour and physical health problems. A range of questionnaires have been developed to assess attitudes to ageing. Some explore attitudes at a societal level, for example, the Facts on Ageing Quiz (Palmore, 1977) and the Ageing Semantic Differential (Rosencranz & McNevin, 1969) which both tap into stereotypes about older people. Others measure attitudes at a personal level. For example, the Reactions to Ageing Questionnaire (Gething, 1994) which is used to assess reactions that individuals have in anticipation of their own ageing. A measure commonly used for exploring attitudes to their own ageing is a five item subscale of the Philadelphia Geriatric

Morale Scale (Lawton, 1975). However, Laidlaw et al.'s (2007) study recently developed the Attitudes to Ageing Questionnaire (AAQ) in order to measure older people's attitudes to their own ageing. This comprehensive questionnaire comprises three subscales which recognise both positive and negative aspects of ageing and it has demonstrated good psychometrics and cross cultural reliability.

Previous research using AAQ

There has been limited research to date using the AAQ. Those studies that have used this measure have shown that negative attitudes to depression are linked to negative attitudes to ageing (Quinn et al., 2009). It has also been shown that having depression (regardless of attitude to depression) has been linked to negative attitudes to ageing (Chachamovich et al., 2008). This effect was still found in people with sub-syndromal depression. In particular, they found that depression was a significant predictor of scores on the Psychosocial Loss subscale of the AAQ. The AAQ has also recently been used in a sample of people with dementia (Trigg et al., 2012) and it was concluded that people with dementia showed more negative attitudes to ageing. Additionally, these negative attitudes had an impact on the quality of life experienced by people with dementia. Bryant et al.'s (2012) study explored attitudes to ageing using the AAQ and its relationship to self reported physical and mental health, and satisfaction with life in a community dwelling sample of 421 people over the age of 60. They found that positive attitudes were linked with increased satisfaction with life and better self reported physical and mental health. They also found lower levels of depression and anxiety in those with more positive attitudes to ageing.

Rationale for current study

Attitudes to ageing have been explored in community dwelling older adults, and links have been found between depressive symptoms and negative attitudes. Other factors have also been shown to correlate with negative attitudes to ageing, including poorer quality of life and poorer subjective physical health (Ron, 2007). It has previously been suggested that feeling older is associated with negative views about cognitive functioning (Schafer & Shippee, 2010). Exploring attitudes to ageing in relation to other factors within a clinical sample will contribute to an increased understanding older people's views of their own ageing and how this may relate to their wellbeing.

Exploring the attitudes of clinically depressed older people will have implications for the treatment of late life depression. Cognitive theory suggests that dysfunctional attitudes are mood state dependent (Laidlaw, 2010) and therefore amenable to change. It has been suggested that challenging attitudes and beliefs about ageing, for example, using standard CBT techniques, may be an effective component for treating depression (Laidlaw, 2010).

Aims

This study aims to compare attitudes to ageing in a clinically depressed sample of older adults and non depressed older adults. It is hypothesised that the clinically depressed sample will show more negative attitudes to ageing than the non depressed control sample. Additionally, this study aims to correlate attitudes to ageing with other factors including anxiety, subjective memory, hopelessness, quality of life, and endorsement of the understandability phenomenon.

Methodology

Participants

Participants in this study included 28 people (15 male: 13 female) over the age of 60 with depression who were receiving input from community mental health teams (CMHTs). Participants were recruited through CMHT clinicians already involved in their care. Inclusion criteria were: a diagnosis of depression, a score of five or above on the GDS-15, and aged over 60 years. Exclusion criteria were: cognitive impairment, substance misuse or psychosis. Clinicians were asked to identify patients on their caseloads who met these criteria. Clinicians then offered potential participants a questionnaire pack, which contained an information sheet, seven self report questionnaires and a stamped addressed envelope. Potential participants could then decide whether or not they would like to complete the questionnaires and return to the researcher anonymously. In total, 370 questionnaire packs were distributed to clinicians (220 in NHS Highland and 150 in NHS Grampian). In total, 28 questionnaire packs were returned (20 from NHS Highland and 8 from NHS Grampian). Of the packs distributed within the health boards, it was not possible to determine how many packs were distributed to potential participants, thus an accurate response rate was not calculated.

Control group data was accessed through existing data held from a sample of healthy older adults who were recruited in the Lothian and Fife areas as part of the AAQ field trial (Laidlaw et al., 2007). Control participants were healthy adults over the age of 60 years.

Measures

For the depressed participants, demographic information was collected by means of a questionnaire which included information on: age, gender, living arrangements, employment status, education level, relationship status and subjective health status (healthy or unhealthy). Participants also completed seven self report measures, each of which is briefly outlined below.

Attitudes to Ageing Questionnaire (AAQ; Laidlaw et al., 2007)

The AAQ is a 24-item self report measure that was developed to assess older people's attitudes towards their own ageing, both positive and negative. The items are divided among three domains. Firstly, psychosocial loss, which focuses on the psychological losses associated with old age, for example, 'old age is a time of loneliness'. Secondly, physical change, which relates to the changes in physical functioning and attitude to health and exercise, for example, 'I keep as fit and active as possible by exercising'. The third subscale is psychological growth, which focuses on the positive aspects of ageing, for example, 'wisdom comes with age'. Each item is rated on a 5-point Likert scale and the scores are totalled for each subscale, resulting in a minimum score of eight and a maximum score of 40.

Geriatric Depression Scale – short form (GDS-15; Sheikh & Yesavage, 1986)

The GDS-15 is a widely used standardised measure for assessing depression in older adults. Responses are entered as 'yes' or 'no' and a score of five or above is used as a cut off score to indicate the presence of depression.

Geriatric Anxiety Inventory – short form (GAI-SF; Byrne & Pachana, 2011)

Anxiety is often co-morbid with late life depression. The GAI-SF is a 5-item self report measure of anxiety. It has demonstrated validity and is recommended for use in research.

World Health Organisation Quality of Life Questionnaire (WHOQOL-BREF; WHO, 1996)

The WHOQOL-BREF is a 26-item measure that assesses quality of life in four domains: physical, psychological, social and environmental. It was developed from the WHOQOL-100 and has shown good internal consistency. Scores on the WHOQOL-BREF are transformed to scores between 0-100 in order to correspond with the WHOQOL-100.

Prospective and Retrospective Memory Questionnaire (PRMQ; Smith et al., 2000)

The PRMQ is a 16-item self report measure that assesses an individual's subjective memory (both prospective and retrospective memory). Crawford et al. (2003) demonstrated that the PRMQ has good reliability and scores are not influenced by age.

Understandability Questionnaire (Law et al., 2010)

The understandability questionnaire was developed to measure the belief that depression is a normal consequence of old age. It comprises three attitudinal statements to which respondents rate their agreement on a 7-point Likert scale.

Beck Hopelessness Scale (BHS; Beck & Steer, 1988)

The BHS measures three aspects of hopelessness: feelings about the future, loss of motivation and expectations. It comprises 20 items which are rated true or false.

The control participants had previously completed the AAQ, GDS-30 and a demographics questionnaire as part of the earlier study (Laidlaw et al., 2007). The demographic questionnaire included information on: age, gender, marital status, living arrangements, education level and subjective health status (healthy or unhealthy). The GDS-30 results were pro-rated so that the scores were equivalent to the GDS-15. The GDS-30 contains all 15 questions in the GDS-15, therefore the results for the GDS-30 were examined and the questions that were surplus to the GDS-15 questions were removed.

Both the control group and the clinically depressed group also completed two single item questions that were measured on a five point Likert scale. Participants were asked to rate their Quality of Life (1-5) and their Satisfaction with Health (1-5).

Datasets

There were 31 questionnaire packs returned during the recruitment period. Three of these scored below five on the GDS-15, indicated no presence of low mood. Therefore, there were 28 clinically depressed participants included in this study. An existing dataset was used to collect control participants' data ($n = 116$). Within this control sample, participants with missing data were removed. Additionally, participants over the age of 90 and under the age of 65 were removed from the control group in order to ensure groups were more evenly matched on age. This resulted in a sample size of 57 in the control group. Of these control participants, 15 scored five or above on the GDS-15, which indicates depression. Therefore, this resulted in three sets of data that were used in the analyses:

- Dataset 1: Clinically depressed group ($n = 28$)
- Dataset 2: Non-depressed controls ($n = 42$)
- Dataset 3: All depressed participants ($n = 43$; comprising 28 clinically depressed and 15 symptomatically depressed participants from the AAQ field trial Scottish dataset)

Hypotheses

Seven individual hypotheses were tested:

- A. *Comparing clinically depressed sample (n = 28) and non depressed control sample (n = 42)*
 - **Hypothesis 1:** The clinically depressed sample will have significantly more negative attitudes to ageing on the Psychosocial Loss subscale compared to the non depressed control sample.

- B. *Comprising all participants scoring >5 on GDS-15 with non depressed controls (n = 85)*
 - **Hypothesis 2:** GDS-15 scores will be a significant predictor of AAQ Psychosocial Loss scores.

- C. *Comprising only the clinically depressed sample (n = 28)*
 - **Hypothesis 3:** Negative attitudes to ageing will be correlated with poorer quality of life
 - **Hypothesis 4:** Negative attitudes to ageing will be correlated with increased hopelessness
 - **Hypothesis 5:** Negative attitudes to ageing will be correlated with higher endorsement of the understandability phenomenon
 - **Hypothesis 6:** Negative attitudes to ageing will be correlated with increased subjective memory complaints
 - **Hypothesis 7:** Negative attitudes to ageing will be correlated with increased anxiety

Results

Exploratory data analysis

Preliminary analyses were carried out to assess the normality of the distribution of data. Visual inspection of histograms and QQ plots were used to assess for skew, kurtosis and outliers. Kolmogorov-Smirnov tests were conducted to assess for normality and Levene's test was used to assess for homogeneity of variance. Variables that violated these assumptions of normality included: 'Quality of Life' (rated 1-5) and 'Satisfaction with Health' (rated 1-5). These variables were analysed using non-parametric tests rather than transforming the data. In preparation for the correlational analyses, scatterplots were also examined. For variables that were normally distributed, Pearson correlations were conducted and for variables that were not normally distributed, the non parametric equivalent was used (i.e. Spearman rank order coefficient). Due to the multiple correlations being made, a more stringent alpha level of 0.01 was used to assess for significance. In relation to multiple regression, assumptions were checked, including multicollinearity, normality, outliers and homoscedacity, none of which were violated.

Sample characteristics

Independent sample t-tests or non-parametric equivalent (i.e. Mann Whitney U test) and chi squared tests were used to compare groups on demographic variables. The depressed group (n = 28) was compared with the non-depressed control group (n = 42). The characteristics are detailed in Table 1.1.

Table 1.1. Characteristics of Sample

Characteristics	Clinically depressed <i>Mean (SD) Or N (%)</i>	Non-depressed <i>Mean (SD) or N (%)</i>	<i>t, z or χ^2 value</i>	<i>P value</i>
GDS-15 Score	10.0 (2.8)	2.0 (1.5)	2.2	<.001
Self rated quality of life	2.7 (1.1)	4.1 (0.7)	5.1	<.001
Self rated satisfaction with health	2.8 (1.2)	3.7 (0.9)	2.9	.003
Age	75 (6.6)	79 (7.1)	2.2	.031
Gender				
Male	15 (53.6)	11 (26.2)	4.3	.038
Female	13 (46.4)	31 (73.8)		
Marital Status				
Married	10 (35.5)	10 (23.8)	3.2	.202
Separated/Single	10 (35.7)	11 (26.2)		
Widowed	8 (28.6)	21 (50.0)		
Living arrangements				
Living with family	8 (28.6)	7 (16.7)	19.8	<.001
Living alone	19 (67.9)	12 (28.6)		
Residential or hospital care	1 (3.5)	23 (54.7)		
Subjective Health				
Healthy	15 (55.6)	38 (90.5)	9.4	.002
Unhealthy	12 (44.4)	4 (9.5)		
Education Level				
Secondary School	15 (53.6)	28 (66.7)	1.2	.541
Trade Certificate	4 (14.3)	4 (9.5)		
College diploma or university degree	9 (32.1)	10 (23.8)		

As indicated in Table 1.1, there were no significant differences between the clinically depressed group and the non depressed group in relation to marital status ($\chi^2 = 3.2, p = .202$) or education level ($\chi^2 = 1.2, p = .541$). As expected, the clinically depressed group had significantly higher GDS-15 scores than the control group ($t(69) = 2.2, p < .001$, *two-tailed*). The depressed group rated their quality of life lower than the control group and they were less satisfied with their health. The mean age of the depressed group was 75 and of the control group was 79, and this difference was statically significant ($t(69) = 2.2, p = .03$, *two-tailed*). There were significant group differences on other demographic variables, including living arrangements ($\chi^2 = 19.8, p < .001$); gender ($\chi^2 = 4.3, p = .04$) and subjective health status ($\chi^2 = 9.4, p = .002$).

Hypothesis driven results

Hypothesis 1: The clinically depressed sample will have significantly more negative attitudes to ageing on the Psychosocial Loss subscale compared to the non depressed control sample.

A one way ANOVA was conducted to compare groups on the AAQ subscales. The means and standard deviations are shown in Table 1.2. Higher AAQ scores indicate more positive attitudes to ageing.

Table 1.2. Mean scores between groups on the AAQ subscales.

	Clinically Depressed (n = 28) <i>Mean (SD)</i>	Non Depressed (n = 42) <i>Mean (SD)</i>	F Value	Significance
AAQ Total	73.6 (10.5)	82.5 (9.4)	13.8	$p < .001$
Psychosocial Loss	22.4 (4.9)	30.9 (3.7)	67.5	$p < .001$
Physical Change	24.3 (5.5)	25.0 (4.0)	.4	$p = .546$
Psychological Growth	26.9 (5.7)	26.6 (4.2)	.1	$p = .811$

As shown in Table 1.2, there was a statistically significant difference between groups on the AAQ Total ($F_{(1, 68)} = 13.8, p < .001$) and on the Psychosocial Loss subscale ($F_{(1, 68)} = 67.5, p < .001$). No significant differences were found between groups on the Physical Change subscale ($F_{(1, 68)} = 0.4, p = .546$) nor the Psychological Growth subscale ($F_{(1, 68)} = 0.1, p = .811$).

Hypothesis 2: *GDS-15 scores will be a significant predictor of AAQ Psychosocial Loss scores.*

Prior to including all participants in this analysis, independent samples t-tests or chi squared analyses were conducted in order to compare the clinically depressed sample and the depressed controls on demographic variables. There were no significant differences in age, gender, marital status or education level. There was a significant difference in living arrangements ($\chi^2 = 14.6, p = .001$) with more of the clinically depressed group living alone. There was also a significant difference in severity of depression with the clinically depressed group reporting higher GDS-15 scores ($M =$

10.0, SD = 2.8) compared with the depressed controls (M = 7.9, SD = 6.9; $t(41) = 2.6, p = .014$).

Prior to conducting a multiple regression, Pearson correlations were conducted to explore the associations between attitudes to ageing and depression level within the whole sample (n = 85: 28 clinically depressed, 15 depressed controls and 42 non depressed controls). All variables, including demographic variables, were entered into the correlation matrix and three variables were found to significantly correlate with the AAQ, as shown in Table 1.3.

Table 1.3. Significant correlations between AAQ scores and predictor variables

	AAQ Subscale			
	AAQ Total	Psychosocial Loss	Physical Change	Psychological Growth
GDS-15 Score	-.577**	-.720**	-.317**	-.213*
Quality of Life	.497**	.485**	.398**	.174
Satisfaction with Health	.512**	.377**	.441**	.285**

** significant at $p < 0.01$

* significant at $p < 0.05$

Strong correlations were found between GDS-15 scores and AAQ total ($r = -.577, p < .001$), and between GDS-15 scores and Psychosocial Loss ($r = -.720, p < .001$). A medium correlation was found between depression and attitudes on the Physical Change subscale ($r = -.317, p = .003$). The direction of the associations suggests that as depressive symptoms increase, overall attitudes to ageing and attitudes in relation to Psychosocial Loss and Physical Change become more negative. This analysis also demonstrated that GDS-15 scores were negatively correlated with Quality of Life (r

= -.699, $p < .001$) and negatively correlated with Satisfaction with Health ($r = -.487$, $p < .001$).

Multiple Regression

Previous studies have examined the impact that depression has on older people's attitudes to ageing. Chachamovich et al. (2008) included depression as a predictor variable in their multiple regression model and found that it accounted for the majority of the variance in attitudes to ageing. The current study included participants with clinical depression and aimed to predict attitudes to ageing based on depression level. If clinical depression has an effect on attitudes to ageing then it can be suggested that such attitudes are mood-state dependent. A multiple regression was therefore conducted using depression (GDS-15 scores) as a predictor variable. Quality of life and Satisfaction with Health were also entered into the model as predictor variables as prior Pearson correlations showed significant associations between these variables and the AAQ subscales. The remaining variables were not entered as they showed no significant correlations with the AAQ. The results of the multiple regression are shown in Table 1.4.

Table 1.4 Multiple Regression model

Predictor	Psychosocial Loss			Physical Change		
	<i>B (SE)</i>	<i>Beta</i>	<i>P value</i>	<i>B (SE)</i>	<i>Beta</i>	<i>P value</i>
GDS-15 Scores	33.0 (.15)	-.725	< .001	.064 (.12)	.054	.699
Quality of Life	-.248 (.61)	-.046	.685	1.30 (.68)	.269	.059
Satisfaction with Health	.237 (.46)	.047	.608	1.48 (.51)	.333	.005

The AAQ was developed to report profile scores (Laidlaw et al., 2007) and the AAQ Total scale is a composite score. For this reason it was not included in the multiple regression. With regard to the Psychosocial Loss subscale, the regression model explained 51.5 per cent of the variance ($F_{(3,81)} = 28.7, p < .001$). Depression made the largest unique contribution (Beta = $-.725$). With regard to the Physical Change subscale, the model explained 23.8 per cent of the variance in attitudes ($F_{(3,81)} = 8.4, p < .001$). Of the variables, Satisfaction with Health made a significant contribution (Beta = $.333$). With regard to the Psychological Growth subscale, the regression model did not reach significance ($R^2 = .085, p = .06$).

Hypotheses 3 – 7 (Correlational Analyses)

The clinically depressed group completed additional questionnaires to the control group. Hypotheses three to seven therefore relate to correlations carried out within the clinically depressed group ($n=28$), to assess associations between AAQ subscales and each of the additional measures. Pearson correlations were conducted for data that met the assumptions for parametric tests and Spearman rank order coefficients are reported for data that did not meet assumptions of normality.

Hypothesis 3: WHOQOL-BREF: Negative attitudes to ageing will be correlated with poorer quality of life.

As illustrated in Table 1.5, attitudes to ageing were significantly positively correlated with psychological and environmental quality of life, though correlations with physical quality of life were nonsignificant and there was no association between

attitudes to ageing and social quality of life. This indicates that higher environmental or psychological quality of life was significantly associated with more positive attitudes to ageing.

Table 1.5. Correlation Matrix of main variables (n = 28)

	AAQ subscale		
	Psychological Loss	Physical Change	Psychological Growth
WHOQOL Physical #	.312	.379	.229
WHOQOL Psychological #	.267	.707**	.528**
WHOQOL Social	.212	.001	-.086
WHOQOL Environmental #	.461*	.371	.394*
BHS	-.416*	-.374	-.558**
Understandability	.221	.377	.280
GAI #	-.275	-.256	-.039
PRMQ	.107	-.340	-.460*

** significant at $p < 0.01$

* significant at $p < 0.05$

Spearman's rho

Hypothesis 4: Beck Hopelessness Scale: Negative attitudes to ageing on the Psychosocial Loss subscale will be correlated with increased hopelessness.

As hypothesised, a significant and negative correlation was found between Psychosocial Loss and hopelessness ($r = -.416$, $p = .043$) which indicates that increased levels of hopelessness are associated with more negative attitudes to ageing. This effect, however, was not significant at the level of $p < 0.01$. It was also found that increased hopelessness was associated with negative attitudes to ageing on the Psychological Growth subscale ($r = -.558$, $p = .006$).

Hypothesis 5: Understandability Questionnaire: Negative attitudes to ageing will be correlated with higher endorsement of the understandability phenomenon.

No significant correlations were found between negative attitudes to ageing and the understandability phenomenon. However, positive correlations were found between the total AAQ scores and endorsement of the understandability phenomenon ($r = .481, p = .011$). This indicates an association between negative attitudes to ageing and increased belief that late life depression is understandable, though this correlation was not significant after adjusting the alpha level for multiple correlations.

Hypothesis 6: Geriatric Anxiety Inventory: Negative attitudes to ageing will be correlated with increased anxiety.

It was found that as self reported anxiety increases, attitudes to ageing become more negative, however, these correlations were not statistically significant.

Hypothesis 7: PRMQ: Negative attitudes to ageing will be correlated with increased subjective memory complaints.

Negative attitudes to ageing on the Psychological Growth subscale were significantly correlated with increased subjective memory problems ($r = -.460, p = .016$). There were no other significant correlation between subjective memory and the other variables.

Discussion

Main findings

The aim of the current study was to examine attitudes to ageing in a clinical sample of depressed older adults. As hypothesised, participants in the clinically depressed sample reported significantly more negative attitudes to ageing in relation to Psychosocial Loss than the non depressed control group. There were no differences between groups with regard to the other subscales, Psychological Growth and Physical Change, which are positively framed. This is consistent with the ageing paradox; despite challenges associated with ageing, older people tend to report high subjective wellbeing. Kunzmann et al. (2000) reported that the concept of subjective well being was relatively stable in older people, whereas negative attitudes have been shown to be mood-state dependent (Miranda & Persons, 1988). Within the whole sample, significant negative correlations were found between attitudes to ageing (on all three subscales of the AAQ) and level of depression. In particular, depression was found to be a significant predictor of scores on the Psychosocial Loss subscale. The effect was large, with the regression model accounting for 51.5 per cent of the variance in Psychosocial Loss. This finding is consistent with the results of Chachamovich et al.'s (2008) study which showed that both depression and quality of life were significant predictors of attitudes to ageing. The results also confirm other research findings correlating depression and negative attitudes in relation to Psychosocial Loss (Bryant et al., 2012; Quinn et al., 2009).

Negative attitudes to ageing on the Psychosocial Loss subscale are therefore likely to be reflective of depressive attributions about ageing and this is not surprising given

that loss is a key cognitive theme in depression. Beck et al.'s (1979) cognitive theory states that individuals with depression have dysfunctional beliefs about themselves, the world and the future. In a stress-diathesis model, pre-existing vulnerabilities to depression and negative beliefs can be triggered by stressful life events, resulting in depression. The finding that depressed older adults reported more negative attitudes to ageing than non depressed older adults supports the theory that dysfunctional attitudes are mood-state dependent. In late life depression, it may be that stressful life events associated with ageing (such as losses) trigger latent negative ageing stereotypes to become salient, resulting in depressed mood. Ageism, both implicit and explicit, is prevalent in society, and the internalisation of negative ageing stereotypes can have a range of adverse effects on people when they become older (Levy, 2009). It has been shown that older people are generally positive about ageing, therefore society must re-evaluate its erroneous perceptions of ageing in order to promote positive attitudes to ageing.

With regard to the other hypotheses, increased hopelessness was correlated with negative attitudes to ageing in relation to Psychosocial Loss, as expected. Hopelessness was also correlated with the understandability phenomenon, suggesting that beliefs about late life depression being normal are associated with feelings of hopelessness. This may have significant implications for psychological therapies as challenging negative and erroneous attitudes about ageing and depression may increase hope and treatment efficacy.

There were no significant associations between attitudes to ageing and anxiety. This is in contrast to previous research findings indicating that positive attitudes on the

Psychosocial Loss subscale were linked with reduced anxiety (Bryant et al., 2012). The non significant finding in the current study may be due to the fact that the shorter five item GAI was used, while Bryant et al. (2012) used the full 20-item GAI. Anxiety is often co-morbid with depression in older people and it may be more prevalent than depression (Laidlaw, 2013). The link between anxiety and attitudes to ageing should be explored further.

Ageing is often stereotypically thought of as a time of reduced physical and cognitive functioning (Mulley, 2007). Feeling older has been associated with poorer subjective cognitive functioning (Shafer & Shippee, 2010), however, the link between attitudes to ageing and subjective memory functioning has not been fully explored. The current study found no correlation between the AAQ and subjective memory. It may be that older people experiencing subjective memory complaints have more negative ageing beliefs, however, the current sample could have been too small to detect any correlation. Trigg et al.'s (2012) study found that people with dementia reported more negative Psychosocial Loss scores. Interestingly they reported that awareness of memory deficits significantly predicted AAQ scores, whereas actual memory functioning did not.

Strengths and limitations of study

A strength of this study is that it corroborates previous research using the AAQ and provides strong evidence for the role of attitudes to ageing in late life depression. The majority of measures used in this study were designed for older people and demonstrate good psychometric properties. This study is the first to use the AAQ in a clinical sample of depressed people. Given that this is the population that clinicians

within CMHTs will be in contact with, the results provide valuable insight into older people's own experiences of ageing.

The results of the study must be considered in the context of several limitations. The small sample size of clinically depressed participants limits the generalisability of the results. Despite over 350 questionnaire packs being distributed to CMHTs, only 31 were returned to the researcher (28 of which were suitable for inclusion in the depressed sample). This low response rate is likely to have been affected by the recruitment strategy. The recruitment method was designed to maximise informed consent and minimise the possibility of patients feeling obligated to participate. However, this required a degree of effort and concentration on the part of the patient in order to read the information and complete the large number of questionnaires, which may have affected the accuracy of responses as well as the response rate. The complexity of the target population and the effect that this may have on participants' ability and willingness to complete the questionnaires accurately may also have contributed to the difficulty recruiting a larger sample size. Additionally, it is likely that clinicians did not hand out the packs to all suitable participants, indicating a possible selection bias. Therefore, this sample may not be an accurate representation of the clinical population of depressed older adults.

The small sample size also affected the choice of statistical analysis that could be used. Multiple regression models would have been more informative in determining what factors are influencing attitudes to ageing. However, correlational analyses have provided an exploration of the data within this population. The cross sectional design also limited the ability to derive inferences about the causality of the results.

Clinical implications

The results of this study highlight the importance of the effect that negative attitudes to ageing can have on a range of physical and mental health outcomes. This study confirmed previous research findings which have indicated that negative attitudes to ageing have a detrimental effect on self reported quality of life (Chachamovich et al., 2008). Psychological therapies such as CBT, which aim to challenge dysfunctional thoughts and beliefs, have been shown to be effective for late life depression therefore improving attitudes may in turn improve quality of life. This has implications for the treatment of late life depression. In an older person with depression, attributing mood to ageing may exacerbate feelings of hopelessness as age is unchangeable. Furthermore, underlying beliefs that little can be done about late life depression may reduce likelihood of individuals seeking help and if they do, it may also significantly reduce expectations for treatment success. Therapists must therefore assess attitudes to ageing in depressed older adults as dysfunctional attitudes may become obstacles during therapy if left unchallenged. Additionally, clinicians must be aware of their own attitudes about ageing as this too may affect treatment expectations. Charlesworth and Greenfield (2004) stated that therapists' ageist beliefs can lead to therapeutic nihilism if not addressed. This highlights the necessity of clinical supervision to facilitate therapists' self reflection.

With the demographic changes indicating a growing older adult population, there will be an increasing demand for psychotherapy for older people. Therapists must be knowledgeable regarding gerontological theories when working with older people in order for therapy to remain effective. Increasing access to psychological therapies for older people has recently become a national priority. The need for specialist services

for older people has been highlighted (NES, 2011) and this is evidenced by increasing training for psychological therapies with older people. Therapy can be augmented using theories of successful ageing such as selective optimisation with compensation (SOC; Baltes, 1997) or by enhancing resilience and wisdom. Comprehensive formulations for older people should consider lifespan development and include factors such as cohort beliefs, physical changes and role changes (Laidlaw et al., 2004).

Further research

Further research is required to explore other variables in relation to attitudes to ageing in order to determine potential mediators. Developing an increased understanding of older people's attitudes towards their own ageing, in relation to depression and other mental health problems, could provide information on how therapy could be augmented for older people and whether there are attitudes that could be targeted. The AAQ comprises three distinct subscales therefore the AAQ may be an optimal tool for researchers to explore ageing attitudes that encompass both the positive and the negative aspects of ageing.

Given that the AAQ appears to be a mood-state dependent measure, it may be useful to carry out longitudinal research which may provide further information on causality. For example, research could examine whether depression is a result of negative ageing stereotypes or whether negative attitudes result from depressed mood. Research could examine therapies which address attitudes to ageing and record measures of attitudes before and after therapy. It would be expected that

attitudes to ageing on the psychosocial loss subscale would improve following psychological therapy, which would be accompanied with an improvement in mood.

Conclusions

The key findings indicate that older people with depression report significantly more negative attitudes to ageing relating to psychosocial loss. Negative attitudes were also associated with poorer self reported quality of life, satisfaction with health and increased hopelessness. These results highlight the importance of addressing attitudes to ageing, both individually and at a societal level. Attitudes are amenable to change and challenging dysfunctional attitudes through psychological therapy may lead to improvements in mood. Therapists working with older people must be trained and knowledgeable in gerontological theories. They must assess for patients' attitudes to ageing and be prepared to challenge their own beliefs about ageing. There is a need to change societal attitudes towards older people and ageing in order to promote well being in this growing sector of the population, to which we may all eventually belong.

References

- Alexopoulos, G.S. (2005). Depression in the elderly. *The lancet*, 365(4), 1961-1970.
- Baltes, P.B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American psychologist*, 52(4), 366.
- Beck, A.T. & Steer, R.A. (1988). Manual for Beck Hopelessness Scale. San Antonio: Psychological corporation.
- Beck, A.T. (Ed.). (1979). *Cognitive therapy of depression*. Guilford Press.
- Blanchard, M. (1992). The elderly. *International review of psychiatry*, 4, 251-256.
- Blazer, D. (2010). Protection from late life depression. *International psychogeriatrics*, 22(2), 171-173.
- Bryant, C., Bei, B., Gilson, K., Komiti, A., Jackson, H. & Judd, F. (2012). The relationship between attitudes to aging and physical and mental health in older adults. *International Psychogeriatrics*, 24, 1674-1683.
- Byrne, G.J. & Pachana, N.A. (2011). Development and validation of a short form of the geriatric anxiety inventory – the GAI-SF. *International psychogeriatrics*, 23(1), 125-131.
- Carstensen, L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G. et al. (2011). Emotional experience improves with age: evidence based on over 10 years of experience sampling. *Psychology and ageing*, 26(1), 21-33.
- Carstensen, L.L., Isaacowitz, D.M. & Charles, S.T. (1999). Taking time seriously: a theory of socioemotional selectivity. *American psychologist*, 54, 165-181.

- Chachamovich, E., Fleck, M., Laidlaw, K. & Power, M. (2008). Impact of major depression and subsyndromal symptoms on quality of life and attitudes toward ageing in an international sample of older adults. *The gerontologist*, 48(5), 593-602.
- Charlesworth, G. & Greenfield, S. (2004). Overcoming barriers to collaborative conceptualisation in cognitive therapy with older adults. *Behavioural and cognitive psychotherapy*, 32, 411-422.
- Covinsky, K.E., Kahan, E., Chin, M.H., Palmer, R.M., Fortinsky, R.H. & Landefeld, C.S. (1999). Depressive symptoms and three year mortality in older hospitalized medical patients. *Annals of internal medicine*, 130, 563-569.
- Diehl, M.K. & Werner-Wahl, H. (2010). Awareness of age-related change: Examination of a (mostly) unexplored concept. *Journal of gerontology: Psychological sciences*, 65B, 340-350.
- Gething, L. (1994). Health professional attitudes towards ageing and older people: Preliminary report of the reactions to ageing questionnaire. *Australian journal on ageing*, 13, 77-81.
- Haudsdorff, J.M., Levy, B.R. & Wei, J.Y. (1999). The power of ageism on physical function of older persons: reversibility of gait changes. *Journal of the American geriatrics society*, 47, 1346-1349.
- Hess, T.M., Auman, C., Colcombe, S.J. & Rahhal, T.A. (2002). The impact of stereotype threat on age differences in memory performance. *Journal of gerontology: psychological sciences*, 57B, 3-11.
- House of Lords Select Committee on Public Service and Demographic Change. (2013). Ready for Ageing? HL Paper 140.

- Kunzmann, U., Little, T.D., & Smith, J. (2000). Is age related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging, 15*, 511-526.
- Laidlaw, K. & Pachana, N.A. (2009). Ageing, mental health and demographic change: challenges for psychotherapists. *Professional psychology: research and practice, 40*(6), 601-608.
- Laidlaw, K. (2010). Are attitudes to ageing and wisdom enhancement legitimate targets for CBT for late life depression and anxiety? *Nordic psychology, 62*(2), 27-42.
- Laidlaw, K., Power, M.J. & Schmidt, S. (2007). The attitudes to ageing questionnaire (AAQ): development and psychometric properties. *International journal of geriatric psychiatry, 22*, 367-379.
- Laidlaw, K., Thompson, L. W., & Gallagher-Thompson, D. (2004). Comprehensive conceptualization of cognitive behaviour therapy for late life depression. *Behavioural and Cognitive Psychotherapy, 32*(4), 389-399.
- Larzelere, M.M., Campbell, J. & Adu-Sarkodie, N.Y. (2011). Psychosocial factors in ageing. *Clinical geriatric medicine, 27*, 645-660.
- Law, J., Laidlaw, K. & Peck, D. (2010). Is depression viewed as an inevitable consequence of age? The 'understandability phenomenon' in older people. *Clinical gerontologist, 33*, 194-209.
- Lawton, M.P. (1975). The Philadelphia Center Morale Scale: a revision. *Journal of gerontology, 30*, 85-89.
- Levy, B. (1996). Improving memory in old age through implicit self stereotyping. *Journal of personality and social psychology, 71*(6), 1092-1107.

- Levy, B.R. (2000). Handwriting as a reflection of ageing stereotypes. *Journal of geriatric psychiatry*, 33, 81-94.
- Levy, B.R. (2003). Mind matters: cognitive and physical effects of ageing self stereotypes. *Journal of gerontology: psychological sciences*, 58B(4), 203-211.
- Levy, B.R. (2009). Stereotype embodiment A psychosocial approach to aging. *Current directions in psychological science*, 18(6), 332 – 336.
- Levy, B.R, Slade, M.D., Kunkel, S. & Kasl, S. (2002). Longitudinal benefit of positive self perceptions of ageing on functional health. *Journal of gerontology: psychological sciences*, 57B, 409-417.
- Levy, B.R., Hausdorff, J., Hencke, R. & Wei, J.Y. (2000). Reducing cardiovascular stress with positive self stereotypes of ageing. *Journal of gerontology, psychological sciences*, 55B, 205-213.
- Levy, B.R. & Myers, L.M. (2004). Preventive health behaviors influenced by self perceptions of ageing. *Preventive medicine*, 39(3), 625-629.
- Linden, M. & Kurtz, G. (2009). A randomised controlled experimental study on the influence of patient age on medical decisions in respect to the diagnosis and treatment of depression in the elderly. *Current gerontology and geriatric research*.
- Luppa, M., Sikorski, C., Luck, T., Ehreke, L., Konnopka, A., Wiese, B. et al. (2012). Age- and gender-specific prevalence of depression in latest-life – Systematic review and meta-analysis. *Journal of affective disorders*, 136, 212-221.
- Miranda, J. & Persons, J. (1988). Dysfunctional attitudes are mood state dependent. *Journal of abnormal psychology*, 97(1), 76-79.
- Moser, C., Spagnoli, J. & Santos-Eggimman, B. (2011). Self-perception of ageing and vulnerability to adverse outcomes at the age of 65-70 years. *The journals of*

- gerontology, series B: psychological sciences and social sciences*, 66(6), 675-680.
- Mulley, G. (2007). Myths of ageing. *Clinical medicine*, 7(1), 68-72.
- NES. (2011). *Delivering Psychological Therapies for Older People in Scotland*.
- Office for National Statistics. (2012). *Population ageing in the United Kingdom, its constituent countries and the European Union*.
- Palmore, E.B. (1977). Facts on ageing: a short quiz. *The gerontologist*, 17, 315-320.
- Ron, P. (2007). Elderly people's attitudes and perceptions of ageing and old age: the role of cognitive dissonance? *International journal of geriatric psychiatry*, 22, 656-662.
- Rosencranz, H.A. & McNevin, T.E. (1969). A factor analysis of attitudes towards the aged. *The gerontologist*, 9, 55-59.
- Sadavoy, J. (2009). An integrated model for defining the scope of psychogeriatrics: the five Cs. *International psychogeriatrics*, 21, 805-812.
- Sarkisian, C.A., Lee-Henderson, M.H. & Mangione, C.M. (2003). Do depressed older adults who attribute depression to 'old age' believe it is important to seek care? *Journal of general internal medicine*, 18(12), 1001-1005.
- Sarkisian, C.A., Prohaska, T.R., Wong, M.D., Hirsch, S. & Mangione, C.M. (2005). The relationship between expectations for ageing and physical activity among older adults. *Journal of general internal medicine*, 20, 911-915.
- Scheibe, S. & Carstensen, L.L. (2010). Emotional aging: recent findings and future trends. *Journal of gerontology: Psychological sciences* 65B, 135-144.
- Scottish Executive. (2007). *All our futures, planning for Scotland with an ageing population*.

- Shafer, M.H. & Shippee, T.P. (2010). Age identity, gender and perceptions of decline: does feeling older lead to pessimistic dispositions about cognitive ageing? *Journal of gerontology: social sciences* 65B(1), 91-96.
- Sheikh, J.I. & Yesavage, J.A. (1986). Geriatric depression scale (GDS) Recent evidence and development of a shorter version. In T.L. Brink. (Eds.) *Clinical gerontology. A guide to assessment and intervention*. Pp. 165-173. NY: The Haworth press, inc.
- Smith, G., Della Sala, S., Logie, R.H. & Maylor, E.A. (2000). Prospective and retrospective memory in normal ageing and dementia. A questionnaire study. *Memory*, 8(5), 311-321.
- Trigg, R., Watts, S., Jones, R., Tod, A. & Elliman, R. (2012). Self reported quality of life rating of people with dementia: the role of attitudes to ageing. *International psychogeriatrics*, 24(7), 1085-1093.
- United Nations. (2009). *World Population Aging*.
- United Nations Population Fund. (2012). *Aging in the 21st century. A celebration and a challenge*.
- Unutzer, J., Katon, W., Callahan, C.M., Williams, J.W., Hunkeler, E., Harpole, L., et al. (2003). Depression treatment in a sample of 1,801 depressed older adults in primary care. *Journal of the American geriatrics society*, 51(4), 505-514.
- Quinn, K.M, Laidlaw, K. & Murray, L.K. (2009). Older peoples' attitudes to mental illness. *Clinical psychology and psychotherapy. An international journal of theory and practice*, 16, 33-45.
- World Health Organisation. (1996). WHOQOL-BREF. World Health Organisation Quality of Life assessment – Brief Version. Geneva.

Overall Thesis Portfolio References

- Alexopoulos, G.S. (2005). Depression in the elderly. *The lancet*, 365(4), 1961-1970.
- Assogna, F., Fagioli, S., Cravello, L., Meco, G., Pierantozzi, M., Stefani, A., et al. (2013). Depressive symptoms in Parkinson's disease and in non-neurological medical illnesses. *Neuropsychiatric Disease and Treatment*, 13(9), 389-396.
- Bains, J., Birks, J. S., & Denning, T. D. (2002). Antidepressants for treating depression in dementia. *Cochrane Database of Systematic Reviews*, 4.
- Baltes, P.B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American psychologist*, 52(4), 366.
- Banerjee, S., Baldwin, R., Ballard, C., Bentham, P., Burns, A., Dewey, M., et al. (2013). Study of the use of antidepressants for depression in dementia: The HTA-SADD trial-a multicentre, randomised, double-blind, placebo-controlled trial of the clinical effectiveness and cost-effectiveness of sertraline and mirtazapine. *Health Technology Assessment*, 17(7)
- Beck, A.T. & Steer, R.A. (1988). Manual for Beck Hopelessness Scale. San Antonio: Psychological corporation.
- Beck, A.T. (Ed.). (1979). *Cognitive therapy of depression*. Guilford Press.
- Beltman, M. W., Voshaar, R. C. O., & Speckens, A. E. (2010). Cognitive-behavioural therapy for depression in people with a somatic disease: Meta-analysis of randomised controlled trials. *The British Journal of Psychiatry*, 197(1), 11-19.
- Blanchard, M. (1992). The elderly. *International review of psychiatry*, 4, 251-256.

- Blazer, D. (2010). Protection from late life depression. *International psychogeriatrics*, 22(2), 171-173.
- Blazer, D. G. (2003). Depression in late life: Review and commentary. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 58(3), M249-M265.
- Brommelhoff, J. A., Gatz, M., Johansson, B., McArdle, J. J., Fratiglioni, L., & Pedersen, N. L. (2009). Depression as a risk factor or prodromal feature for dementia? Findings in a population-based sample of Swedish twins. *Psychology and Aging*, 24(2), 373-384.
- Broomfield, N. M., Laidlaw, K., Hickabottom, E., Murray, M. F., Pendrey, R., Whittick, J. E., et al. (2011). Post-stroke depression: The case for augmented, individually tailored cognitive behavioural therapy. *Clinical Psychology & Psychotherapy*, 18(3), 202-217.
- Bryant, C., Bei, B., Gilson, K., Komiti, A., Jackson, H. & Judd, F. (2012). The relationship between attitudes to aging and physical and mental health in older adults. *International Psychogeriatrics*, 24, 1674-1683.
- Burn, D. J. (2002). Beyond the iron mask: Towards better recognition and treatment of depression associated with Parkinson's disease. *Movement Disorders*, 17(3), 445-454.
- Burns, A., Guthrie, E., Murino-Francis, F., Busby, C., Morris, J., Russell, E., et al. (2005). Brief psychotherapy in Alzheimer's disease: Randomised controlled trial. *British Journal of Psychiatry*, 187, 143-147.
- Byrne, G.J. & Pachana, N.A. (2011). Development and validation of a short form of the geriatric anxiety inventory – the GAI-SF. *International psychogeriatrics*, 23(1), 125-131.

- Carstensen, L., Turan, B., Scheibe, S., Ram, N., Ersner-Hersfield, H., Samanez-Larkin, G. et al. (2011). Emotional experience improves with age: evidence based on over 10 years of experience sampling. *Psychology and ageing*, 26(1), 21-33.
- Carstensen, L.L., Isaacowitz, D.M. & Charles, S.T. (1999). Taking time seriously: a theory of socioemotional selectivity. *American psychologist*, 54, 165-181.
- Chachamovich, E., Fleck, M., Laidlaw, K. & Power, M. (2008). Impact of major depression and subsyndromal symptoms on quality of life and attitudes toward ageing in an international sample of older adults. *The gerontologist*, 48(5), 593-602.
- Charidimou, A., Seamons, J., Selai, C., & Schrag, A. (2011). The role of cognitive-behavioural therapy for patients with depression in Parkinson's disease. *Parkinson's Disease*,
- Charlesworth, G. & Greenfield, S. (2004). Overcoming barriers to collaborative conceptualisation in cognitive therapy with older adults. *Behavioural and cognitive psychotherapy*, 32, 411-422.
- Cheston, R., Jones, K., & Gilliard, J. (2003). Group psychotherapy and people with dementia. *Aging and Mental Health*, 7(6), 452-461.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155.
- Cole, K., & Vaughan, F. L. (2005). Brief cognitive behavioural therapy for depression associated with Parkinson's disease: A single case series. *Behavioural and Cognitive Psychotherapy*, 33(1), 89-102.
- Covinsky, K.E., Kahan, E., Chin, M.H., Palmer, R.M., Fortinsky, R.H. & Landefeld, C.S. (1999). Depressive symptoms and three year mortality in older hospitalized medical patients. *Annals of internal medicine*, 130, 563-569.

- Crawford, J., Smith, G., Maylor, E., Della Sala, S., & Logie, R. (2003). The prospective and retrospective memory questionnaire (PRMQ): Normative data and latent structure in a large non-clinical sample. *Memory, 11*(3), 261-275.
- CRD. (2008). *Systematic review: CRDs guidance for undertaking reviews in health care*. University of York: CRD.
- Cuijpers, P., van Straten, A., Smit, F., & Andersson, G. (2009). Is psychotherapy for depression equally effective in younger and older adults? A meta-regression analysis. *International Psychogeriatrics, 21*(01), 16-24.
- Diehl, M.K. & Werner-Wahl, H. (2010). Awareness of age-related change: Examination of a (mostly) unexplored concept. *Journal of gerontology: Psychological sciences, 65B*, 340-350.
- Dobkin, R. D., Allen, L. A., & Menza, M. (2006). A cognitive-behavioral treatment package for depression in Parkinson's disease. *Psychosomatics, 47*(3), 259-263.
- Dobkin, R. D., Allen, L. A., & Menza, M. (2007). Cognitive-behavioral therapy for depression in Parkinson's disease: A pilot study. *Movement Disorders, 22*(7), 946-952.
- Dobkin, R. D., Menza, M., Allen, L. A., Gara, M. A., Mark, M. H., Tiu, J., et al. (2011a). Cognitive-behavioral therapy for depression in Parkinson's disease: A randomized controlled trial. *American Journal of Psychiatry, 168*(10), 1066-1074.
- Dobkin, R. D., Menza, M., Allen, L. A., Tiu, J., Friedman, J., Bienfait, K. L., et al. (2011b). Telephone-based cognitive-behavioral therapy for depression in Parkinson disease. *Journal of Geriatric Psychiatry and Neurology, 24*(4), 206-214.

- Fann, J. R., Hart, T., & Schomer, K. G. (2009). Treatment for depression after traumatic brain injury: A systematic review. *Journal of Neurotrauma*, 26(12), 2383-2402.
- Farabaugh, A., Locascio, J. J., Yap, L., Growdon, J., Fava, M., Crawford, C., et al. (2010). Cognitive-behavioral therapy for patients with Parkinson's disease and comorbid major depressive disorder. *Psychosomatics*, 51(2), 124-129.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191.
- Feeney, F., Egan, S., & Gasson, N. (2005). Treatment of depression and anxiety in Parkinson's disease: A pilot study using group cognitive behavioural therapy. *Clinical Psychologist*, 9(1), 31-38.
- Field, A. (2009). *Discovering statistics using SPSS* Sage publications.
- Firth, N. (2013). Effectiveness of psychologically focused group interventions for multiple sclerosis: A review of the experimental literature. *Journal of Health Psychology*. DOI: 1359105313479630.
- Friedman, B., Heisel, M. J., & Delavan, R. L. (2005). Psychometric properties of the 15-Item geriatric depression scale in functionally impaired, cognitively intact, Community-Dwelling elderly primary care patients. *Journal of the American Geriatrics Society*, 53(9), 1570-1576.
- Gellis, Z. D., McClive-Reed, K. P., & Brown, E. L. (2009). Treatments for depression in older persons with dementia. *Annals of Long-Term Care*, 17(2), 29-36.

- Gething, L. (1994). Health professional attitudes towards ageing and older people: Preliminary report of the reactions to ageing questionnaire. *Australian journal on ageing, 13*, 77-81.
- Ghazi-Noori, S., Chung, T. H., Deane, K. H. O., Rickards, H., & Clarke, C. E. (2003). Therapies for depression in Parkinson's disease. *Cochrane Database of Systematic Reviews, 3*.
- Gibbons, L. E., Teri, L., Logsdon, R., McCurry, S. M., Kukull, W., Bowen, J., et al. (2002). Anxiety symptoms as predictors of nursing home placement in patients with Alzheimer's disease. *Journal of Clinical Geropsychology, 8*(4), 335-342.
- González-Salvador, M. T., Arango, C., Lyketsos, C. G., & Barba, A. C. (1999). The stress and psychological morbidity of the Alzheimer patient caregiver. *International Journal of Geriatric Psychiatry, 14*(9), 701-710.
- Gould, R. L., Coulson, M. C., & Howard, R. J. (2012). *Journal of the American Geriatric Society, 60*, 1817-1830.
- Green, S. B. (1991). How many subjects does it take to do a regression analysis. *Multivariate Behavioral Research, 26*(3), 499-510.
- Hackett, M. L., Anderson, C. S., House, A., & Xia, J. (2008). Interventions for treating depression after stroke. *Cochrane Database of Systematic Reviews, 4*.
- Halford, J., & Brown, T. (2009). Cognitive-behavioural therapy as an adjunctive treatment in chronic physical illness. *Advances in Psychiatric Treatment, 15*(4), 306-317.
- Hassiotis, A., Serfaty, M., Azam, K., Strydom, A., Blizard, R., Romeo, R., et al. (2013). Manualised individual cognitive behavioural therapy for mood disorders in people with mild to moderate intellectual disability: A feasibility

- randomised controlled trial. *Journal of Affective Disorders*. DOI: 10.1016/2013.05.076
- Haudsdorff, J.M., Levy, B.R. & Wei, J.Y. (1999). The power of ageism on physical function of older persons: reversibility of gait changes. *Journal of the American geriatrics society*, 47, 1346-1349.
- Hess, T.M., Auman, C., Colcombe, S.J. & Rahhal, T.A. (2002). The impact of stereotype threat on age differences in memory performance. *Journal of gerontology: psychological sciences*, 57B, 3-11.
- Hoe, J., Hancock, G., Livingston, G., & Orrell, M. (2006). Quality of life of people with dementia in residential care homes. *The British Journal of Psychiatry*, 188(5), 460-464.
- Hofmann, S. G., & Smits, J. A. J. (2008). Cognitive-behavioral therapy for adult anxiety disorders: A meta-analysis of randomized placebo-controlled trials. *Journal of Clinical Psychiatry*, 69, 621-632.
- House of Lords Select Committee on Public Service and Demographic Change. (2013). Ready for Ageing? HL Paper 140.
- Jorm, A. F. (2000). Does old age reduce the risk of anxiety and depression? A review of epidemiological studies across the adult life span. *Psychological Medicine*, 30(01), 11-22.
- Kaufman, G. (2011). Polypharmacy in older adults. *Nursing Standard*, 25(38), 49-55.
- Kiosses, D. N., Arean, P. A., Teri, L., & Alexopoulos, G. S. (2010). Home-delivered problem adaptation therapy (PATH) for depressed, cognitively impaired, disabled elders: A preliminary study. *American Journal of Geriatric Psychiatry*, 18(11), 988-998.

- Kneebone, I. I., & Dunmore, E. (2000). Psychological management of post-stroke depression. *British Journal of Clinical Psychology*, 39(Pt 1), 53-65.
- Kneebone, I. I., & Lincoln, N. B. (2012). Psychological problems after stroke and their management: State of knowledge. *Neuroscience and Medicine*, 3, 83-89.
- Kootker, J. A., Fasotti, L., Rasquin, S. M. C., van Heugten, C. M., & Geurts, A. C. H. (2012). The effectiveness of an augmented cognitive behavioural intervention for post-stroke depression with or without anxiety (PSDA): The Restore4Stroke-PSDA trial. *BMC Neurology*, 12(1), 51.
- Kunzmann, U., Little, T.D., & Smith, J. (2000). Is age related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging*, 15, 511-526.
- Laidlaw, K. & Pachana, N.A. (2009). Ageing, mental health and demographic change: challenges for psychotherapists. *Professional psychology: research and practice*, 40(6), 601-608.
- Laidlaw, K. (2010). Are attitudes to ageing and wisdom enhancement legitimate targets for CBT for late life depression and anxiety? *Nordic psychology*, 62(2), 27-42.
- Laidlaw, K., Power, M.J. & Schmidt, S. (2007). The attitudes to ageing questionnaire (AAQ): development and psychometric properties. *International journal of geriatric psychiatry*, 22, 367-379.
- Laidlaw, K., Thompson, L. W., & Gallagher-Thompson, D. (2004). Comprehensive conceptualization of cognitive behaviour therapy for late life depression. *Behavioural and Cognitive Psychotherapy*, 32(4), 389-399.

- Laidlaw, K., Thompson, L. W., & Gallagher-Thompson, D. (2004). Comprehensive conceptualization of cognitive behaviour therapy for late life depression. *Behavioural and Cognitive Psychotherapy*, 32(4), 389-399.
- Larzelere, M.M., Campbell, J. & Adu-Sarkodie, N.Y. (2011). Psychosocial factors in ageing. *Clinical geriatric medicine*, 27, 645-660.
- Law, J., Laidlaw, K. & Peck, D. (2010). Is depression viewed as an inevitable consequence of age? The 'understandability phenomenon' in older people. *Clinical gerontologist*, 33, 194-209.
- Lawton, M.P. (1975). The Philadelphia Center Morale Scale: a revision. *Journal of gerontology*, 30, 85-89.
- Leentjens, A. F. G. (2004). Depression in Parkinson's disease: Conceptual issues and clinical challenges. *Journal of Geriatric Psychiatry and Neurology*, 17(3), 120-126.
- Levy, B. (1996). Improving memory in old age through implicit self stereotyping. *Journal of personality and social psychology*, 71(6), 1092-1107.
- Levy, B.R, Slade, M.D., Kunkel, S. & Kasl, S. (2002). Longitudinal benefit of positive self perceptions of ageing on functional health. *Journal of gerontology: psychological sciences*, 57B, 409-417.
- Levy, B.R. & Myers, L.M. (2004). Preventive health behaviors influenced by self perceptions of ageing. *Preventive medicine*, 39(3), 625-629.
- Levy, B.R. (2000). Handwriting as a reflection of ageing stereotypes. *Journal of geriatric psychiatry*, 33, 81-94.
- Levy, B.R. (2003). Mind matters: cognitive and physical effects of ageing self stereotypes. *Journal of gerontology: psychological sciences*, 58B(4), 203-211.

- Levy, B.R. (2009). Stereotype embodiment A psychosocial approach to aging. *Current directions in psychological science*, 18(6), 332 – 336.
- Levy, B.R., Hausdorff, J., Hencke, R. & Wei, J.Y. (2000). Reducing cardiovascular stress with positive self stereotypes of ageing. *Journal of gerontology, psychological sciences*, 55B, 205-213.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., et al. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *British Medical Journal*, 21, 339-b2700.
- Lincoln, N. B., & Flannaghan, T. (2003). Cognitive behavioural psychotherapy for depression following stroke. A randomised controlled trial. *Stroke*, 34, 111-115.
- Lincoln, N. B., Flannaghan, T., Sutcliffe, L., & Rother, L. (1997). Evaluation of cognitive behavioural treatment for depression after stroke: A pilot study. *Clinical Rehabilitation*, 11, 114-122.
- Linden, M. & Kurtz, G. (2009). A randomised controlled experimental study on the influence of patient age on medical decisions in respect to the diagnosis and treatment of depression in the elderly. *Current gerontology and geriatric research*.
- Longmore, R. J., & Worrell, M. (2007). Do we need to challenge thoughts in cognitive behavior therapy? *Clinical Psychology Review*, 27(2), 173-187.
- Lucas-Carrasco, R., Laidlaw, K., & Power, M. J. (2011). Suitability of the WHOQOL-BREF and WHOQOL-OLD for Spanish older adults. *Aging & Mental Health*, 15(5), 595-604.

- Luengo-Fernandez, R., Leal, J., & Gray, A. (2010). *Dementia 2010: The economic burden of dementia and associated research funding in the United Kingdom*. Cambridge: Alzheimer's Research Trust.
- Luppa, M., Sikorski, C., Luck, T., Ehreke, L., Konnopka, A., Wiese, B. et al. (2012). Age- and gender-specific prevalence of depression in latest-life – Systematic review and meta-analysis. *Journal of affective disorders*, 136, 212-221.
- Lyketsos, C. G., & Olin, J. (2002). Depression in Alzheimer's disease: Overview and treatment. *Biological Psychiatry*, 52, 243-252.
- Macht, M., Pasqualini, M. S., & Taba, P. (2007). Cognitive-behavioral strategies for Parkinson's disease: A report of three cases. *Journal of Clinical Psychology in Medical Settings*, 14(2), 165-176.
- Menza, M., Dobkin, R. D., Marin, H., Mark, M. H., Gara, M., Buyske, S., et al. (2009). The impact of treatment of depression on quality of life, disability and relapse in patients with Parkinson's disease. *Movement Disorders*, 24(9), 1325-1332.
- Miranda, J. & Persons, J. (1988). Dysfunctional attitudes are mood state dependent. *Journal of abnormal psychology*, 97(1), 76-79.
- Misayaki, J. M., Shannon, K., Voon, V., Ravina, B., Kleiner-Fisman, G., Anderson, K., et al. (2006). Practice parameter: Evaluation and treatment of depression, psychosis, and dementia in Parkinson disease (an evidence-based review) report of the quality standards subcommittee of the American academy of neurology. *Neurology*, 66(7), 996-1002.
- Mitchell, P. H., Veith, R. C., Becker, K. J., Buzaitis, A., Cain, K. C., Fruin, M., et al. (2009). Brief psychosocial-behavioural intervention with antidepressant

- reduces post stroke depression significantly more than usual care with antidepressant. *Stroke*, 40, 3073-3078.
- Mohr, D. C., Boudewyn, A. C., Goodkin, D. E., Bostrom, A., & Epstein, L. (2001). Comparative outcomes for individual cognitive-behavior therapy, supportive-expressive group psychotherapy, and sertraline for the treatment of depression in multiple sclerosis. *Journal of Consulting and Clinical Psychology*, 69(6), 942.
- Moser, C., Spagnoli, J. & Santos-Eggimman, B. (2011). Self-perception of ageing and vulnerability to adverse outcomes at the age of 65-70 years. *The journals of gerontology, series B: psychological sciences and social sciences*, 66(6), 675-680.
- Mulley, G. (2007). Myths of ageing. *Clinical medicine*, 7(1), 68-72.
- National Institute of Clinical Evidence. (October 2009). *Depression: The treatment and management of depression in adults*
- NES. (2011). *Delivering Psychological Therapies for Older People in Scotland*.
- NES. (2011). *The matrix. Mental health in Scotland: A guide to delivering evidence-based psychological therapies in Scotland*
- O'Connor, D. W., Ames, D., Gardner, B., & King, M. (2009). Psychosocial treatments of psychological symptoms in dementia: A systematic review of reports meeting quality standards. *International Psychogeriatrics*, 21(2), 241-251.
- Office for National Statistics. (2012). *Population ageing in the United Kingdom, its constituent countries and the European Union*.
- Palmore, E.B. (1977). Facts on ageing: a short quiz. *The gerontologist*, 17, 315-320.

- Parekh-Bhurke, S., Kwok, C. S., Pang, C., Hooper, L., Loke, Y. K., Ryder, J. J., et al. (2011). Uptake of methods to deal with publication bias in systematic reviews has increased over time, but there is still much scope for improvement. *Journal of Clinical Epidemiology*, 64(4), 349-357.
- Paukert, A. L., Calleo, J., Kraus-Schuman, C., Snow, L., Wilson, N., Petersen, N. J., et al. (2010). Peaceful mind: An open trial of cognitive-behavioral therapy for anxiety in persons with dementia. *International Psychogeriatrics*, 22(6), 1012-1021.
- Pinquart, M., Duberstein, P. R., & Lyness, J. M. (2007). Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. *Aging & Mental Health*, 11(6), 645-657.
- Quinn, K.M, Laidlaw, K. & Murray, L.K. (2009). Older peoples' attitudes to mental illness. *Clinical psychology and psychotherapy. An international journal of theory and practice*, 16, 33-45.
- Raskind, M. A. (2008). Diagnosis and treatment of depression comorbid with neurologic disorders. *The American Journal of Medicine*, 121, S28-S37.
- Rasquin, S. M., Van De Sande, P., Praamstra, A. J., & Van Heugten, C. M. (2009). Cognitive-behavioural intervention for depression after stroke: Five single case studies on effects and feasibility. *Neuropsychological Rehabilitation*, 19(2), 208-222.
- Reijnders, J. S. A. M., Ehrt, U., Weber, W. E. J., Aarsland, D., & Leentjens, A. F. G. (2008). A systematic review of prevalence studies of depression in Parkinson's disease. *Movement Disorders*, 23(2), 183-189.

- Richardson, T., & Marshall, A. (2012). Cognitive behavioural therapy for depression in advanced Parkinson's disease: A case illustration. *The Cognitive Behaviour Therapist*, 5, 60-69.
- Rickards, H. (2005). Depression in neurological disorders: Parkinson's disease, multiple sclerosis, and stroke. *Neurology in Practice*, 76(1), 48-52.
- Rickards, H. (2006). Depression in neurological disorders: An update. *Current Opinion in Psychiatry*, 19(3), 294-298.
- Robinson, R. G., Jorge, R. E., Moser, J. D., Acion, L., Solodkin, A., Small, S. L., et al. (2008). Escitalopram and problem solving therapy for prevention of post stroke depression. *Journal of American Medical Association*, 299(20), 2391-2400.
- Rodda, J., Walker, Z., & Carter, J. (2011). Depression in older adults. *BMJ*, 343.
- Ron, P. (2007). Elderly people's attitudes and perceptions of ageing and old age: the role of cognitive dissonance? *International journal of geriatric psychiatry*, 22, 656-662.
- Rosencranz, H.A. & McNevin, T.E. (1969). A factor analysis of attitudes towards the aged. *The gerontologist*, 9, 55-59.
- Sadavoy, J. (2009). An integrated model for defining the scope of psychogeriatrics: the five Cs. *International psychogeriatrics*, 21, 805-812.
- Sarkisian, C.A., Lee-Henderson, M.H. & Mangione, C.M. (2003). Do depressed older adults who attribute depression to 'old age' believe it is important to seek care? *Journal of general internal medicine*, 18(12), 1001-1005.
- Sarkisian, C.A., Prohaska, T.R., Wong, M.D., Hirsch, S. & Mangione, C.M. (2005). The relationship between expectations for ageing and physical activity among older adults. *Journal of general internal medicine*, 20, 911-915.

- Scheibe, S. & Carstensen, L.L. (2010). Emotional aging: recent findings and future trends. *Journal of gerontology: Psychological sciences* 65B, 135-144.
- Scholey, K. A., & Woods, B. T. (2003). A series of brief cognitive therapy interventions with people experiencing both dementia and depression: A description of techniques and common themes. *Clinical Psychology and Psychotherapy*, 10, 175-185.
- Scottish Executive. (2007). *All our futures, planning for Scotland with an ageing population*.
- Scottish Intercollegiate Guidelines Network. (November 2011). *SIGN 50: A guideline developer's handbook* (Revised ed.). Edinburgh: SIGN Executive.
- Shafer, M.H. & Shippee, T.P. (2010). Age identity, gender and perceptions of decline: does feeling older lead to pessimistic dispositions about cognitive ageing? *Journal of gerontology: social sciences* 65B(1), 91-96.
- Sheikh, J.I. & Yesavage, J.A. (1986). Geriatric depression scale (GDS) Recent evidence and development of a shorter version. In T.L. Brink. (Eds.) *Clinical gerontology. A guide to assessment and intervention*. Pp. 165-173. NY: The Haworth press, inc.
- Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The world health organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A report from the WHOQOL group. *Quality of Life Research*, 13(2), 299-310.
- Slaughter, J. R., Slaughter, K. A., Nichols, D., Holmes, S. E., & Martens, M. P. (2001). Prevalence, clinical manifestations, etiology, and treatment of depression in Parkinson's disease. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 13(2), 187-196.

- Smith, G., Della Sala, S., Logie, R.H. & Maylor, E.A. (2000). Prospective and retrospective memory in normal ageing and dementia. A questionnaire study. *Memory*, 8(5), 311-321.
- Snaith, R. P., Harrop, F. M., Newby, T. D. A., & Teale, C. (1986). Grade scores of the montgomery-åberg depression and the clinical anxiety scales. *The British Journal of Psychiatry*,
- Snarski, M., Scogin, F., DiNapoli, E., Presnell, A., McAlpine, J., & Marcinak, J. (2011). The effects of behavioral activation therapy with inpatient geriatric psychiatry patients. *Behavior Therapy*, 42(1), 100-108.
- Spector, A., Orrell, M., Lattimer, M., Hoe, J., King, M., Harwood, K., et al. (2012). Cognitive behavioural therapy (CBT) for anxiety in people with dementia: Study protocol for a randomised controlled trial. *Trials*, 13(1), 197.
- Steed, L. (2001). Further validity and reliability evidence for beck hopelessness scale scores in a nonclinical sample. *Educational and Psychological Measurement*, 61(2), 303-316.
- Sutcliffe, C., Burns, A., Challis, D., Mozley, C. G., Cordingley, L., Bagley, H., et al. (2007). Depressed mood, cognitive impairment, and survival in older people admitted to care homes in England. *American Journal of Geriatric Psych*, 15(8), 708-715.
- Teri, L. (1994). Behavioral treatment of depression in patients with dementia. *Alzheimer Disease & Associated Disorders*, 8(Suppl 3), 66-74.
- Teri, L., Logsdon, R. G., Uomoto, J., & McCurry, S. M. (1997). Behavioral treatment of depression in dementia patients: A controlled clinical trial. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences*, 52(4), P159-66.

- Thomas, S. A., Walker, M. F., MacNiven, J. A., Haworth, H., & Lincoln, N. B. (2012). Communication and low mood (CALM): A randomised controlled trial of behavioural therapy for stroke patients with aphasia. *Clinical Rehabilitation*, 27(5), 398-408.
- Thombs, B. D., Ziegelstein, R. C., Pilote, L., Dozois, D. J. A., Beck, A. T., Dobson, K. S., et al. (2010). Somatic symptom overlap in beck depression inventory-II scores following myocardial infarction. *The British Journal of Psychiatry*, 197, 61-66.
- Trigg, R., Watts, S., Jones, R., Tod, A. & Elliman, R. (2012). Self reported quality of life rating of people with dementia: the role of attitudes to ageing. *International psychogeriatrics*, 24(7), 1085-1093.
- United Nations Population Fund. (2012). *Aging in the 21st century. A celebration and a challenge*.
- United Nations. (2009). *World Population Aging*.
- Unutzer, J., Katon, W., Callahan, C.M., Williams, J.W., Hunkeler, E., Harpole, L., et al. (2003). Depression treatment in a sample of 1,801 depressed older adults in primary care. *Journal of the American geriatrics society*, 51(4), 505-514.
- Veazey, C., Cook, K. F., Stanley, M., Lai, E. C., & Kunik, M. E. (2009). Telephone-administered cognitive behavioral therapy: A case study of anxiety and depression in Parkinson's disease. *Journal of Clinical Psychology in Medical Settings*, 16(3), 243-253.
- Visser, M., Leentjens, A. F. G., Marinus, J., Stiggelbout, A. M., & van Hilten, J. J. (2006). Reliability and validity of the beck depression inventory in patients with Parkinson's disease. *Movement Disorders*, 21(5), 668-672.

- Walker, D. A. (2004). Cognitive behavioural therapy for depression in a person with Alzheimer's dementia. *Behavioural and Cognitive Psychotherapy*, 32(04), 495-500.
- Watkins, C. L., Auton, M. F., Deans, C. F., Dickinson, H. A., Jack, C. I. A., Lightbody, C. E., et al. (2007). Motivational interviewing early after acute stroke a randomized controlled trial. *Stroke*, 38(3), 1004-1009.
- Wilkins, V. M., Kiosses, D., & Ravdin, L. D. (2010). Late-life depression with comorbid cognitive impairment and disability: Nonpharmacological interventions. *Clinical Interventions in Aging*, 5, 323-331.
- Williams, L. S., Kroenke, K., Bakas, T., Plue, L. D., Brizendine, E., Tu, W., et al. (2007). Care management of post stroke depression a randomized, controlled trial. *Stroke*, 38(3), 998-1003.
- World Health Organisation. (1996). WHOQOL-BREF. World Health Organisation Quality of Life assessment – Brief Version. Geneva.
- Yang, S., Sajatovic, M., & Walter, B. L. (2012). Psychosocial interventions for depression and anxiety in Parkinson's disease. *Journal of Geriatric Psychiatry and Neurology*, 25(2), 113-121.
- Yesavage, J. A., Brink, T. L., Rose, T. L., Lum, O., Huang, V., Adey, M., et al. (1983). Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research*, 17(1), 37-49.

Appendices

Appendix 1: Author Guidelines: Systematic Review (Clinical Psychology Review)

Appendix 2: Author Guidelines: Empirical Research Study (Psychology and Aging)

Appendix 3: North of Scotland REC Approval

Appendix 4: R&D Approval NHS Highland

Appendix 5: R&D Approval NHS Grampian

Appendix 5: Participant Information Sheet

Appendix 1: Author Guidelines (Clinical Psychology Review)

Article structure

Manuscripts should be prepared according to the guidelines set forth in the Publication Manual of the American Psychological Association (6th ed., 2009). Of note, section headings should not be numbered.

Manuscripts should ordinarily not exceed 50 pages, *including* references and tabular material. Exceptions may be made with prior approval of the Editor in Chief. Manuscript length can often be managed through the judicious use of appendices. In general the References section should be limited to citations actually discussed in the text. References to articles solely included in meta-analyses should be included in an appendix, which will appear in the on line version of the paper but not in the print copy. Similarly, extensive Tables describing study characteristics, containing material published elsewhere, or presenting formulas and other technical material should also be included in an appendix. Authors can direct readers to the appendices in appropriate places in the text.

It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least through the prior calendar year) so the data are still current at the time of publication. Authors are referred to the PRISMA Guidelines (<http://www.prisma-statement.org/statement.htm>) for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required, but is recommended to enhance quality of submissions and impact of published papers on the field.

Appendices

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Abstract

A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Figure captions

Ensure that each illustration has a caption. Supply captions separately, not attached to the figure. A caption should comprise a brief title (**not** on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

Tables

Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

References

Citations in the text should follow the referencing style used by the American Psychological Association. You are referred to the Publication Manual of the American Psychological Association, Sixth Edition, ISBN 1-4338-0559-6, copies of which may be ordered from <http://books.apa.org/books.cfm?id=4200067> or APA Order Dept., P.O.B. 2710, Hyattsville, MD 20784, USA or APA, 3 Henrietta Street, London, WC3E 8LU, UK. Details concerning this referencing style can also be found at <http://humanities.byu.edu/linguistics/Henrichsen/APA/APA01.html>

Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Reference style References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters "a", "b", "c", etc., placed after the year of publication. **References should be formatted with a hanging indent (i.e., the first line of each reference is flush left while the subsequent lines are indented).**

Appendix 2: Author Guidelines (Psychology and Aging)

Length

Manuscripts should not exceed 8,000 words (approximately 27 double-spaced pages in 12-point Times New Roman font). Shorter manuscripts are equally welcomed.

The word count does not include references, tables, and figures. If you feel that you need extra space, please contact the editor. For example, you may have a complex methodology or statistical approach or a new theoretical framework that requires more text.

Please include the word count for the main text below the keywords.

Brief Reports

The Brief Report format is designated for particularly "crisp," theoretically noteworthy contributions that meet highest methodological standards. Use 12-point Times New Roman type and 1-inch (2.54-cm) margins; include an abstract of 75–100 words; do not exceed 265 lines of text, not including references; and typically include no more than two tables or figures.

Manuscript Preparation

Prepare manuscripts according to the [Publication Manual of the American Psychological Association \(6th edition\)](#). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).

Review APA's [Checklist for Manuscript Submission](#) before submitting your article.

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.

Below are additional instructions regarding the preparation of display equations and tables.

Abstract and Keywords

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Examples of basic reference formats:

- **Journal Article:**
Hughes, G., Desantis, A., & Waszak, F. (2013). Mechanisms of intentional binding and sensory attenuation: The role of temporal prediction, temporal control, identity prediction, and motor prediction. *Psychological Bulletin*, 139, 133–151. <http://dx.doi.org/10.1037/a0028566>
- **Authored Book:**
Rogers, T. T., & McClelland, J. L. (2004). *Semantic cognition: A parallel distributed processing approach*. Cambridge, MA: MIT Press.
- **Chapter in an Edited Book:**
Gill, M. J., & Sypher, B. D. (2009). Workplace incivility and organizational trust. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), *Destructive organizational communication: Processes, consequences, and constructive ways of organizing* (pp. 53–73). New York, NY: Taylor & Francis.

Appendix 3: North of Scotland REC Approval

NRES Committees - North of Scotland

Summerfield House
2 Eday Road
Aberdeen
AB15 6RE

Telephone: 01224 558458
Facsimile: 01224 558609
Email: nosres@nhs.net



4 December 2012

Ms Alison Raeburn
Department of Psychological Services
Drumossie Unit
New Craigs Hospital
6-16 Leachkin Road
INVERNESS
IV3 8NP

RECEIVED

Dear Ms Raeburn

Study title: Attitudes to ageing and clinical depression in older people
REC reference: 12/NS/0097

Thank you for your letter which we received on 3 December 2012. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 28 September 2012.

Documents received

The documents received were as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		3 December 2012*
Letter of invitation to participant	1	26 October 2012
Sample Size Calculation		3 December 2012*
Questionnaire: Geriatric Anxiety Inventory - Short Form		3 December 2012*
Questionnaire: The Prospective and Retrospective Memory Questionnaire		3 December 2012*
Questionnaire: Geriatric Depression Rating Scale		3 December 2012*
Participant Information Sheet	2	15 October 2012
Questionnaire: About You	2	15 October 2012
Questionnaire: WHOQOL-BREF	2	15 October 2012

<i>Document</i>	<i>Version</i>	<i>Date</i>
Questionnaire: BHS	2	15 October 2012
Questionnaire: Attitudes to Ageing Questionnaire (AAQ-24)		3 December 2012*
Questionnaire: Understandability Measure		3 December 2012*

* date received

Approved documents

The final list of approved documentation for the study is therefore as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		3 December 2012*
Investigator CV		4 September 2012
Letter of invitation to participant	1	26 October 2012
Dr Ken Laidlaw - CV		3 September 2012
GP Letter	1	30 August 2012
Sample Size Calculation		3 December 2012*
Questionnaire: Geriatric Anxiety Inventory - Short Form		3 December 2012*
Questionnaire: The Prospective and Retrospective Memory Questionnaire		3 December 2012*
Questionnaire: Geriatric Depression Rating Scale		3 December 2012*
Participant Consent Form	1	30 August 2012
Participant Information Sheet	2	15 October 2012
Protocol	1	28 August 2012
Questionnaire: About You	2	15 October 2012
Questionnaire: WHOQOL-BREF	2	15 October 2012
Questionnaire: BHS	2	15 October 2012
Questionnaire: Attitudes to Ageing Questionnaire (AAQ-24)		3 December 2012*
Questionnaire: Understandability Measure		3 December 2012*
REC application	111324/36347 3/1/167	13 September 2012
Referees or other scientific critique report		3 September 2012

* date received

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

Yours sincerely

Carol Irvine

**Mrs Carol Irvine
Acting Scientific Officer**

Copy to: Frances Hines, NHS Highland

Appendix 4: NHS Highland R&D Approval

Professor Angus Watson
Research & Development Director
NHS Highland Research & Development Office
Room S101
Centre for Health Science
Old Perth Road
Inverness
IV2 3JH

Tel: 01463 255822
Fax: 01463 255838
E-mail: angus.watson@nhs.net



10 January 2013

NHS Highland R&D ID: **860**
NRSPCC ID: **NA**

Ms Alison Raeburn
Trainee Clinical Psychologist
Department of Psychological Services
Drumossie Unit
New Craigs Hospital
6 – 16 Leachkin Road
Inverness
IV3 8NP

RECEIVED

Dear Miss Raeburn,

Management Approval for Non-Commercial Research

I am pleased to tell you that you now have Management Approval for the research project entitled: **'Attitudes to Ageing and Clinical Depression in Older People'**. I acknowledge that:

- The project is sponsored by NHS Highland.
- The project does not require external funding.
- Research Ethics approval for the project has been obtained from the North of Scotland Research Ethics Committee, (Reference Number: 12/NS/0097).
- The project is Site-Specific Assessment exempt.

The following conditions apply:

- The responsibility for monitoring and auditing this project lies with NHS Highland.



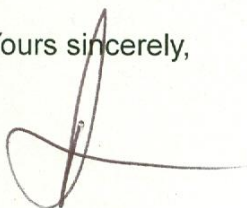
Headquarters:
NHS Highland, Assynt House, Beechwood Park, Inverness, IV2 3HG

Chairman: Mr Garry Coutts
Chief Executive: Elaine Mead
Highland NHS Board is the common name of Highland Health Board

- This study will be subject to ongoing monitoring for Research Governance purposes and may be audited to ensure compliance with the Research Governance Framework for Health and Community Care in Scotland (2006, 2nd Edition), however prior written notice of audit will be given.
- All amendments (minor or substantial) to the protocol or to the REC application should be copied to the NHS Highland Research and Development Office together with a copy of the corresponding approval letter.
- The paperwork concerning all incidents, adverse events and serious adverse events, thought to be attributable to participant's involvement in this project should be copied to the NHS Highland R&D Office.
- Monthly recruitment rates should be notified to the NHS Highland Research and Development Office, detailing date of recruitment and the participant trial ID number. This should be done by e-mail on the first week of the following month.

Please report the information detailed above, or any other changes in resources used, or staff involved in the project, to the NHS Highland Research and Development Manager, Frances Hines (01463 255822, frances.hines@nhs.net).

Yours sincerely,



Professor Angus Watson
NHS Highland Research and Development Director

cc Frances Hines, R&D Manager, NHS Highland Research & Development Office,
Room S101, The Centre for Health Science, Old Perth Road, Inverness, IV2 3JH

Appendix 5: NHS Grampian R&D Approval

Research and Development

Foresterhill House Annexe
Foresterhill
Aberdeen
AB25 2ZB



Ms Alison Raeburn
Dept of Psychological Services
Drumossie
New Craigs Hospital
Inverness
IV2 8NP

Date 27 February 2013
Our Ref 2013MH002
Enquiries to Lynn Massie
Extension 53846
Direct Line 01224 553846
Email grampian.randdpermissions@nhs.net

Dear Ms Raeburn

Management Permission for Non-Commercial Research

REC Ref: 12/NS/0097

NRS Ref: NRS13/MH93

Project title: Attitudes to ageing and clinical depression in older people

Thank you very much for sending all relevant documentation. I am pleased to confirm that the project is now registered with the NHS Grampian Research & Development Office. The project now has R & D Management Permission to proceed locally. This is based on the documents received from yourself and the relevant Approvals being in place.

All research with an NHS element is subject to the Research Governance Framework for Health and Community Care (2006, 2nd edition), and as Chief or Principal Investigator you should be fully committed to your responsibilities associated with this.

It is particularly important that you inform us when the study terminates.

The R&D Office must be notified immediately and any relevant documents forwarded to us if any of the following occur:

- A change of Principal Investigator, Chief Investigator or any additional research personnel
- Premature project termination
- Any amendments – substantial or non-substantial (particularly a study extension)
- Any change to funding or any additional funding

We hope the project goes well, and if you need any help or advice relating to your R&D Management Permission, please do not hesitate to contact the office.

Yours sincerely

A handwritten signature in black ink, appearing to be 'S. Ridge', with a stylized flourish at the end.

Susan Ridge
Non-Commercial Manager

c.c. NRS Permissions CC

Participant Information Sheet – Version 2

Study title: Attitudes to ageing and clinical depression in older people.

You are being invited to take part in a research study. Please take time to read this information sheet carefully before you decide whether or not you would like to take part.

Thank you for your time.

Why are we doing this research?

The aim of this research project is to explore attitudes to ageing in people who have depression. Depression is a common problem for older people, however, it is often undiagnosed and older people may not receive the help and treatment that they need. Depression can cause a range of symptoms including sleep disturbance, fatigue and sadness. When people feel depressed, they also tend to think more negatively. This study aims to explore attitudes, particularly relating to ageing. It also aims to explore whether there are any links between attitudes and other factors including anxiety and quality of life. Since attitudes and beliefs can be changed through psychological therapy, having a greater understanding of them may lead to improved interventions for depression in later life.

Why have I been chosen?

We would like to you take part in this study because you are over the age of 60 and have a diagnosis of depression.

Do I have to take part?

You do not have to take part in this study. It is up to you to decide whether or not to take part. You can withdraw from taking part at anytime during the study, without giving a reason, and your current or future treatment will not be affected.

What is involved?

If you would like to take part, you can complete the enclosed questionnaires and return in the stamped addressed envelope. If you have any queries about the questionnaires, you can phone the researcher for further assistance. All questionnaires will be anonymous.

Will there be any harm in participating in this study?

There will be no harm to you if you participate in this study. If there is anything raised in the questionnaires which you find upsetting, the researcher will be available to discuss this with you. You can also speak to your GP or other health professional about this.

Will there be any benefits to taking part in the study?

There will be no direct benefits to you taking part in the study. However, your taking part will help us learn more about attitudes to ageing and depression in older people. This may then lead to developing more effective psychological treatments for depression in later life.

Will my taking part be kept confidential?

All information collected in this study will be kept strictly confidential. Your name and address will not appear on the questionnaires you complete therefore there will be no identifiable information on any of the results. You will not be able to be recognised from the results of your questionnaires.

What will happen to the results of the study?

This study will be written up as part of the researcher's Doctorate in Clinical Psychology qualification. The results may also be published in a scientific journal. No participant identifiable information will be used in any report.

If you would like to receive a summary of the results following completion of the study, you can contact the researcher, Alison Raeburn.

Who has organised and reviewed the study?

The study is being funded by the University of Edinburgh. It has been reviewed by researchers based in the University and by clinical supervisors in the NHS.

With regard to ensuring participants' rights, safety and confidentiality, the North of Scotland Research Ethics Committee has reviewed the study.

What if there is a problem?

If you have any concerns or if you would like further information, you can speak to the researcher, Alison Raeburn, on 01463 253697 and she can answer any questions you have.

If you would like to speak to an independent person about this study, you can speak to Dr Brigid Walker, Consultant Clinical Psychologist on 01463 253697.

Thank you for considering taking part in this study.